

# Corrective Measures Completion Report for the Corrective Measures Implementation at Solid Waste Management Unit 11, Laundry Effluent Pond and Waste Pile Areas

# **Tooele Army Depot Tooele, Utah**



Prepared for: Sacramento District U.S. Army Corps of Engineers Sacramento, California By North Wind, Inc. Contract No. DACW05-00-D-0024, D.O. 006

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#### **ACRONYMS**

bgs below ground surface

CAO corrective action objective

CAP Corrective Actions Permit

CDQMP Chemical Data Quality Management Plan

CFR Code of Federal Regulations

CMCR Corrective Measures Completion Report

CQCP Contractor Quality Control Plan

EPA Environmental Protection Agency

FTL field team leader

HDPE high-density polyethylene

HWD hazardous waste determination

MDL method detection limit

MPE MP Environmental Services

MSAI Mountain States Analytical, Inc.

NIOSH National Institute of Occupational Safety and Health

OSHA Occupational Safety and Health Administration

QCSR Quality Control Summary Report

RAP Remedial Action Plan

RCRA Resource Conservation and Recovery Act

SSHP Site Safety and Health Plan

SWMU Solid Waste Management Unit

TEAD Tooele Army Depot

USACE United States Army Corps of Engineers

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#### 1. INTRODUCTION

North Wind, Inc. (North Wind) prepared this Corrective Measures Completion Report (CMCR) for the Sacramento District U.S. Army Corps of Engineers (USACE). This report documents the remediation of Solid Waste Management Unit (SWMU) 11, known as the Laundry Effluent Pond and Waste Pile Areas at the Tooele Army Depot (TEAD) in Utah. The purpose of this remediation was to implement the remedy selected in the *Corrective Measures Study Report* (Dames & Moore 2001) in compliance with the TEAD *Resource Conservation and Recovery Act (RCRA) Corrective Action Permit* (TEAD 2001).

#### 2. SITE LOCATION AND HISTORY

The TEAD is located near the city of Tooele, Utah, approximately 35 miles southwest of Salt Lake City. The site was originally established by the U.S. Army Ordnance Department as the Tooele Ordnance Depot. The primary mission was the storage, maintenance, and demilitarization of military vehicles, topographic equipment, troop support items, power generators, and conventional munitions. In 1993, a portion of TEAD was placed on the Base Realignment and Closure list and the maintenance activities were transferred to another installation. The current mission of TEAD is the storage, maintenance, and demilitarization of conventional munitions. A Federal Facility Agreement was entered into between the U.S. Army, U.S. Environmental Protection Agency (EPA) Region VIII, and the State of Utah in 1991. A RCRA Post-Closure Permit was issued by the State of Utah in 1991 and reissued in 2001. This post closure permit includes a Corrective Action Permit (CAP) that requires actions at 40 SWMUs. SWMU 11 is one of the Known Release SWMUs identified in the permit.

SWMU 11 is located near Building 1252 (in the ammunition storage area) in the south-central portion of TEAD (Figure 1). Five discrete sites within the SWMU boundaries, referred to as the laundry effluent pond, sewage pond, and waste piles 1-3, were identified for remedial action. The laundry effluent pond is an unlined earthen drainage pond that received laundry and shower discharges from Building 1267 for over 40 years, ceasing in 1990. Boiler blow-down was also discharged there until 1995. The sewage pond, also an unlined earthen drainage pond, was constructed in 1980 but was never put into service (AEEC 2002). The sewage pond may have received inadvertent flows from a nearby septic leach field. The waste pile area lies to the east of the laundry effluent pond. This area had been used for disposal of scrap metal, automobile parts, and construction debris; however, the bulk of the surface debris was removed in 1993.

#### 3. REMEDIAL ACTION PLAN

This section summarizes the implementation requirements from the *Final Remedial Action Plan*, *SWMU 11*, *Laundry Effluent Pond and Waste Pile Areas* (RAP; AEEC 2002), including the corrective action requirements and approved variations to the RAP.

North Wind. Inc. 1 SWMU 11 CMCR

Figure 1. Location of SWMU 11 Laundry Pond and Waste Pile areas in the TEAD ammunition storage area.

#### 3.1 Corrective Action Requirements

During the RCRA Facility Investigation (RFI; Rust E&I 1995), elevated concentrations of metals and semivolatile organic compounds were identified in both the sewage and laundry ponds. Soil samples collected from the waste pile areas exhibited high concentrations of metals. Contaminants were identified in surface soil samples and in borehole samples down to depths of 5 ft. The results of the investigation were further evaluated in the *Corrective Measures Study Work Plan* (Dames & Moore 2000). It was concluded that the contaminated soil in the laundry and sewage ponds and in the waste pile areas posed moderate risk for TEAD personnel and potential future construction workers at these sites.

Subsequently, a number of remedial action alternatives were evaluated in the *Corrective Measures Study Report* (Dames & Moore 2001). The selected remedial alternative for SWMU 11 included institutional controls and removal and off-site disposal of contaminated soils from the pond and waste pile areas to prevent potential exposure of human receptors. The *Corrective Measures Study Report* (Dames & Moore 2001) specified quantitative corrective action objectives (CAOs) for the removal action (Table 1).

Table 1. Corrective action objectives from the *Corrective Measures Study Report* (Dames & Moore 2001).

Contaminant	CAO (mg/kg)
Lead	1,800
Arsenic	32
bis(2-Ethylhexyl)phthalate	78
Benz(a)anthracene	2.2
Benzo(b)fluoranthene	2.2

The RAP (AEEC 2002) provided detailed guidance for implementing the selected remedial alternative and included requirements for the following actions:

- 1. **Preparatory Activities**. The RAP (AEEC 2002) identified requirements for preparation of field guidance documents, including a Site Safety and Health Plan (SSHP), dust control plan, contractor quality control plan (CQCP), site security plan, and a spill prevention plan.
- 2. **Excavation Activities.** The RAP (AEEC 2002) specified that sufficient soil be removed from the five excavation areas so that remaining soil concentrations fall below the CAOs. The RAP specified dimensions of each excavation area and estimated that soil in the five areas would need to be removed to a depth of 1 to 2 ft below grade.
- 3. **Confirmatory Sampling and Overexcavation.** The RAP (AEEC 2002) described a sampling strategy whereby discrete soil samples were to be collected from the bottoms and sidewalls of each excavation area to confirm whether post-excavation contaminant concentrations exceed their respective CAOs. Excavation would continue until CAOs were achieved or until otherwise directed by the USACE.
- 4. Soil Disposal. The RAP (AEEC 2002) required that waste soil removed from SWMU 11 be profiled, manifested, and transported to a licensed disposal facility in accordance with all federal and state regulations.
- 5. **Site Restoration.** The RAP (AEEC 2002) indicated that clean backfill would be brought in and placed in the completed excavations to bring the areas to grade.

#### 3.2 Approved Variances from the Remedial Action Plan

The following two changes to the RAP were requested by North Wind and approved by the USACE prior to the start of the fieldwork. These modifications did not alter the remedial action, as selected in the *Corrective Measures Study Report* (Dames & Moore 2001), but did modify implementation guidance provided in the RAP. These changes were necessary to optimize the work activities and to address actual site conditions encountered at the time of the remedial action.

- In situ characterization of soil for disposal. The RAP (AEEC 2002) described a process whereby the soil would be excavated and temporarily stored on site while analysis and profiling was completed. However, because extreme winds can make stockpile management difficult at TEAD, North Wind was concerned that Army personnel in the SWMU 11 vicinity could potentially be exposed to lead and arsenic contaminated dust during the temporary accumulation period. North Wind proposed an alternative approach to USACE, TEAD, and Utah Department of Environmental Quality, whereby the waste soils would be characterized in place, prior to excavation, by collecting numerous samples at different depths throughout the excavation areas. This process provided a representative, yet conservative, waste profile because samples could be biased to high concentration locations. In addition, USACE saved approximately \$72,000 by eliminating the need for temporary accumulation and reloading of the waste soil.
- Grading waste pile areas in lieu of backfilling. The RAP (AEEC 2002) specified that after the CAOs are met, the waste pile excavations were to be returned to natural grade with clean backfill material. However, the USACE decided that because the excavations were shallow and were located in undeveloped areas on the depot, they should simply be graded to blend in with the surrounding topography without use of any additional backfill material. This approach was also supported by TEAD.

#### 4. CORRECTIVE MEASURES IMPLEMENTATION

This section provides a summary of the corrective measures that were implemented at SWMU 11 in accordance with the requirements described in Section 3. Section 4.1 summarizes the preparatory work that was completed prior to the start of fieldwork. Section 4.2 describes the excavation activities and Section 4.3 describes the confirmatory sampling procedures and results. Section 4.4 describes the profiling and disposal of the hazardous waste. Section 4.5 describes the site restoration activities.

#### 4.1 Preparatory Activities

#### 4.1.1 Documentation

North Wind performed a substantial amount of preparatory work, which included developing field guidance documents and arranging for suppliers and services. The following preconstruction documents were prepared and submitted for USACE approval prior to construction:

- SSHP
- Site Security Plan
- Dust Control Plan
- Spill Prevention Plan
- Remedial Action Schedule
- CQCP.

#### 4.1.2 Installation Clearances

During the preparatory phase of this project, North Wind submitted a request for an excavation permit to the TEAD office of public works. The excavation permit was approved prior to the start of fieldwork by the TEAD realty specialist, facilities support division, communications contractor, coaxial cable manager, the environmental office, and the installation support division. The excavation permit is provided in Appendix A.

#### 4.1.3 Transportation, Treatment, and Disposal Services

Early in the planning process, North Wind arranged for transportation and disposal services. MP Environmental Services (MPE) of Grantsville, Utah was contracted to transport the waste soil to the disposal facility. MPE offers a range of transport options, including 22- and 30-ton end dump trucks and roll-off bins of various sizes. MPE had supported North Wind and the USACE on previous projects and provided highly qualified and professional drivers.

Clean Harbors of Salt Lake City was contracted to provide treatment and disposal services. Clean Harbors operates a number of licensed treatment, storage, and disposal facilities. Their Grassy Mountain, Utah site was selected to receive the waste soil. Prior to the start of fieldwork, Clean Harbors reviewed and approved the waste profiles and worked with MPE to schedule receipt of the transport trucks.

#### 4.1.4 Support Services

Services were also arranged from a number of local suppliers for items such as equipment rental, waste transportation, surveying, sanitation services, etc. in preparation for the field activities. MPE was contracted for waste transport services and Clean Harbors of Salt Lake City provided waste disposal services.

#### 4.2 Excavation Activities

This section describes the fieldwork performed at SWMU 11, including work control procedures, site security measures, decontamination procedures, field documentation procedures, and soil removal.

#### 4.2.1 Work Control Procedures

North Wind developed an SSHP meeting the requirements established in the RAP (AEEC 2002), 29 CFR 1910.120/1926.65, "Hazardous Waste Operations and Emergency Response," USACE Safety and Health Requirements Manual (EM 385-1-1), National Institute of Occupational Safety and Health (NIOSH)/ Occupational Safety and Health Agency (OSHA)/U.S. Coast Guard/Environmental Protection Agency (EPA) Occupational Safety and Health Guidance Manual for Hazardous Waste Activities, and USACE Safety and Occupational Health Document Requirements for Hazardous, Toxic, and Radioactive Waste (ER 385-1-92).

All fieldwork was performed in accordance with the requirements and controls established in the SSHP. Prior to the start of the remediation work, an excavation competent site supervisor ensured that the laundry effluent pond met OSHA requirements for safe personnel entry. Due to the depth, steepness, and unconsolidated soil type at the laundry effluent, some effort was required to contour the pond sidewalls to a slope of less than 1.5:1 (34-degree angle). In addition, it was necessary to construct a bench along one side of the excavation area to provide equipment access to the pond bottom.

The SSHP also specified protective measures to control potential exposure to airborne contaminants as a result of the high concentrations of lead and arsenic in the waste pile soils. All personnel working inside of the waste pile contamination reduction zones wore air-purifying (high-efficiency particulate air) respirators during excavation and loading activities. All respirator users were trained, medically qualified, and quantitatively fit-tested for respirator use prior to the start of fieldwork.

In addition to personal protective measures, the field team used a Miniram® real-time aerosol monitor and high volumes of water spray to continually monitor and control dust levels. An airborne particulate action level of 1.07 mg/m³, which is below the concentration that can be detected visually, was established in the SSHP to help evaluate the effectiveness of the dust control measures. At the outset of earthwork, dust levels measured in the equipment cab with open windows exhibited transient peaks as high as 1.98 mg/m³ for periods less than 10 seconds. The soil was so dry and fine-grained that attempts to pre-soak the sites and continuous use of water spray during digging operations proved to be ineffective. Therefore, the dust control technique was modified so that before any soil was removed from a site, the excavator operator would slowly mix the soil and water in place within the excavation area to thoroughly dampen the soil prior to handling. This technique considerably reduced dust levels associated with digging and dumping actions. Miniram® readings at the Waste Pile 2 exclusion zone boundary ranged from 0.0 to 0.3 mg/m³ after mixing. Readings near waste transport trucks during loading were 0.1 to 0.3 mg/m³.

Personal breathing zone sampling for lead and arsenic was also performed in accordance with NIOSH Method 7400. One equipment operator was monitored for one full period (8 hours). Results of the air sampling ( $0.8~\mu g/m^3$  calculated time weighted average for lead and non-detect for arsenic) indicated that lead and arsenic concentrations in the breathing zone were significantly below American Conference of Governmental Industrial Hygienists and OSHA action limits. These data support the conclusion that even with extremely dry and fine-grained soil types, North Wind's monitoring techniques and engineering controls are adequate to ensure compliance with the regulatory action limits.

#### 4.2.2 Site Security

Security controls were established at the site as required for hazardous waste operations. The various work zones were set up prior to the start of excavation according to the requirements in the SSHP. Barriers were set around the perimeter of the work areas utilizing steel t-posts, construction barrier rope, and postings to prevent unintentional entry by unauthorized personnel. A parking/support zone was established near the excavation sites. An exclusion zone was established around each excavation area, while a secondary contamination reduction zone was established around each exclusion zone. The contamination reduction zones also encompassed the traffic lanes for the heavy equipment to minimize personnel in the construction area. In accordance with TEAD procedures, all vehicles, equipment, and tool trailers were locked when not in use. TEAD provided temporary security passes for every member of the field team, including truck drivers, surveyors, and other support personnel. TEAD security officers also routinely inspected vehicles entering and exiting the ammunition storage area.

#### 4.2.3 Decontamination Procedures

Because all excavation areas were less than 40 ft wide, it was possible to conduct each excavation without driving the equipment into the exclusion zones. Keeping the tracks/tires of the equipment outside of the contaminated areas minimized the potential spread of contamination. At the end of the excavation work, and between excavations at the effluent ponds and waste pile areas, the excavator and front end loader buckets were cleaned by hand over polyethylene sheeting using low pressure water sprayers, shovels, wire brushes, putty knives, and disposable wipes. All debris was rolled up in the polyethylene sheeting and added to the last bulk soil load at the end of the day. No free liquid wastes were generated. The waste transport trucks were lined with polyethylene sheeting to minimize contamination of the truck beds and were washed out as necessary at the disposal facility.

#### 4.2.4 Field Documentation

Detailed notes of the fieldwork were recorded in a dedicated project field book. The logbook included a brief description of activities undertaken at the site, including the time and date undertaken, visitors, and names of contractor personnel at the site. Sampling information was also recorded in the logbook. The sample identifier, date and time of each sample collected, sample custody information, and site diagrams were recorded. An extensive photographic record was also kept. The photographs included pre-construction conditions, excavation procedures, the excavation at its maximum depth, and the restored sites. A copy of the project field logbook is provided in Appendix B. Project photographs are provided in Appendix C.

#### 4.2.5 Soil Removal and Loading

Excavation activities at SWMU 11 were conducted over a 2-week period in the fall of 2003. An experienced crew, with current OSHA HAZWOPER qualifications, mobilized to the site on October 13, 2003 and commenced site preparations, removing fencing and sloping the sidewalls around the laundry effluent pond, establishing work control zones, staging equipment, and conducting preparatory inspections. A kickoff meeting was held on October 13, 2003 with TEAD, USACE, and North Wind representatives to discuss the planned activities and to establish common expectations for a successful project. Prior to the start of fieldwork, all required site-specific training was completed and all field team members were briefed on the scope and requirements of each work activity. In addition, a safety briefing was held at the start of each day to allow field team members an opportunity to discuss the planned activities, associated hazards, and make suggestions to improve the overall work processes.

The SMWU 11 laundry effluent and sewage pond excavations presented several challenges. First, as discussed in Section 4.2.1, the laundry effluent sidewalls were too steep to allow for personnel entry. Second, waste transport trucks could not park near the excavation area due to the soft ground conditions and inaccessibility of the pond bottoms. Finally, the USACE required that a minimum volume of waste material be excavated, essentially skimming a uniform layer of soil from each excavation area. These constraints were addressed by the following procedures.

The first phase of the earthwork consisted of sloping the laundry effluent pond sidewalls. All four sides were pulled back to maintain at least a 1.5:1 (34-degree) slope. A ramp was constructed at the southwestern corner of the pond to provide equipment access to the excavation area located in the pond center. The second phase of the earthwork consisted of the removal of the contaminated soil. As specified in the RAP (AEEC 2002), the USACE had previously staked out rectangular areas ranging from  $15 \times 15$ ft to 40 × 50 ft. Following the USACE corner stakes, North Wind painted excavation boundaries on the ground to guide the equipment operators. Initial ground surface elevations within each excavation area were also measured using a laser level. These measurements were referred to throughout the excavation to control the depth of the excavation. Using a painted 2-ft mark on the excavator bucket as a reference, the operator skimmed a fairly uniform 2-ft layer of soil from each of the excavation areas (with the exception of the sewage pond which required a 1-ft deep excavation). A second operator maneuvered a 5.5-yd<sup>3</sup> front loader so that the loader bucket was suspended over the contaminated area within the reach of the excavator. The excavator transferred the contaminated soil into the loader bucket (approximately four excavator buckets to each 5.5-yd<sup>3</sup> loader bucket) and any spilled soil fell back into the contaminated excavation area. At no time did either piece of machinery drive into the exclusion zones. The loader then shuttled the soil to waiting waste transport trucks. Six-mil high-density polyethylene (HDPE) sheeting was spread on the ground adjacent to the waste transport trucks to catch any inadvertent spills during loading.

Using this technique, with extensive precautions for dust generation and spill prevention, the contaminated soil was removed from the five excavation areas over a 5-day period. A total of 23 end dump trucks (22 to 30 yd³) and 14 roll-off bins (20-yd³ steel containers) were filled to weight capacity during the excavation activities. Results of the initial round of confirmation samples indicated that residual contamination levels in all five areas fell below their respective CAOs and no further excavation was necessary. A brief description of the excavation at each site is provided below:

- Excavation activities at the laundry effluent pond commenced on October 14, 2003. The 18 × 18-ft wide area was excavated to 2 ft in depth on that day. Approximately 24 yd<sup>3</sup> of material was loaded into two trucks.
- Excavation activities at Waste Pile 3 were conducted on October 14 and 15, 2003. An area 30 × 45 ft was removed to 2 ft below ground surface (bgs) (approximately 100 yd³ of soil). Five 20-yd³ roll-off bins and one end dump truck were filled.
- Waste Pile 2 was excavated on October 15 and 16, 2003. An area measuring 50 × 42 ft was excavated to a depth of 2 ft bgs (approximately 156 yd³ of soil). Waste Pile 2 soils contained some small debris including wood fragments, scrap metal, concrete, and broken glass. A total of eight end dump trucks and two 20-yd³ roll-off bins were filled.
- The Waste Pile 1 excavation took place on October 16 and 17, 2003 and October 20, 2003. An area 70 × 30 ft was excavated to a depth of 2 ft bgs (approximately 156 yd³ of soil). Seven 20-yd³ roll-off bins and five end dumps were filled.
- The sewage pond excavation was conducted on October 20, 2003. An area  $60 \times 32$  ft in the bottom center of the sewage pond was excavated to a depth of 1 ft bgs (approximately 71 yd<sup>3</sup> of soil). Five end dump trucks were filled.

A Utah licensed surveyor recorded the final excavation boundaries and sample locations on October 22, 2003. The surveyor used a Topcon GTS-4 total station and reported data in North American Datum (NAD) 1983, Utah State Plane Projection, Central Zone. The surveyor utilized USACE provided control points (rebar stakes) at the nearby SWMU 25 site to tie in the SWMU 11 coordinates. The surveyor's report is included in Appendix D. Figures 2 and 3 illustrate the dimensions of the excavations, as recorded by a licensed surveyor.

### 4.3 Confirmatory Sampling

This section describes the procedures and results of confirmation sampling to determine residual levels of contamination after excavation.

#### 4.3.1 Confirmatory Sampling Procedure

The sampling method specified in the RAP (AEEC 2002) is a systematic method whereby the bottom and sidewalls of each excavation area are divided into cells and one grab sample is collected from each cell. Table 2 summarizes the specified number of samples and required analyses for each excavation area. Figures 2 and 3 illustrate the sample locations and provide coordinates for each sample collected, as recorded by a licensed surveyor.

Table 2. Required samples and analytes for each excavation area.

	Bottom Samples	Sidewall Samples	Metals (Method 6010B)	Semivolatile Organics (Method 8270C)
Waste Pile 1	2	6	arsenic and lead	
Waste Pile 2	2	6	arsenic and lead	
Waste Pile 3	1	4	arsenic and lead	
Sewage Pond	2	6		benz(a)anthracene and benzo(b)fluoranthene
Laundry Pond	1	6 <sup>a</sup>		bis(2-Ethylhexyl)phthalate

a. USACE requested two additional sidewall samples near the original location of the Laundry Pond outfall pipe, for a total of six confirmation samples at the laundry effluent pond.

The soil samples were collected using approved TEAD *Chemical Data Quality Management Plan* (CDQMP) standard operating procedures (USACE 1999). Pre-cleaned sample jars provided by Mountain States Analytical, Inc. (MSAI) were labeled according to the sampling plan. "Forms II Lite," developed by Dyncorp for EPA, was used to generate sample labels and chain of custody forms. The sample locations were laid out with a measuring tape and marked with wooden stakes, which were also labeled with sample location identifiers. The sampler used decontaminated stainless steel spoons to collect each sample. New gloves and decontaminated spoons were used with each sample to prevent potential cross-contamination. Before mobilizing to the site, the sampler had washed all non-disposable equipment with alconox and distilled water and packaged them in aluminum foil or zip lock bags with custody seals to ensure they didn't become contaminated during transport. No field decontamination of sampling equipment was necessary.

Split samples were collected by placing approximately 30 mL of soil into a disposable aluminum pan, homogenizing the sample by hand using a stainless steel spoon, and then filling each sample jar with a few grams at a time from the homogenized batch of soil. An equipment blank was also collected by rinsing all of the decontaminated sample spoons and the aluminum mixing pan with high purity water and collecting the rinsate in a 500-ml HDPE container.

All required sample information was recorded on sample labels, in the logbook, and on chain of custody forms, as specified in applicable TEAD CDQMP standard operating procedures (SOPs 1.1, 1.2, 2.1; USACE 1999). Sample labels were covered with clear tape to prevent smearing. Neither chemical nor temperature preservation were required for the waste pile samples according to the Method 6010B, "Inductively Coupled Plasma-Atomic Emission Spectrometry" (EPA 1996a). The samples from the ponds were chilled using wet ice, as required by Method 8270C, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry" (EPA 1996b). Temperature blanks were included with the pond samples to verify that sample preservation requirements were met. Custody seals were affixed either to the sample container or to the sample cooler lid to prevent tampering. All samples were in the custody of the sampling team at all times until they were relinquished to the laboratory.

North Wind selected MSAI to analyze the confirmation samples. MSAI was certified by the State of Utah and validated by the USACE. Prior to the start of fieldwork, North Wind issued a scope of work and technical requirements to the laboratory and tentatively scheduled delivery dates for the SWMU 11 samples to ensure rapid turnaround. Severn-Trent Laboratories in Sacramento, California was identified by the USACE to analyze the quality assurance split samples.

#### 4.3.2 Confirmatory Sample Results

Tables 3 through 5 provide the confirmation sample results for each excavation area. These tables provide the field sample identification number and the associated location identifier, as recorded in the USACE Automated Data Review system. The CAO for each analyte and the report method detection limit (MDL) are also included in the tables.

The laboratory analytical reports (report numbers 0310117, 0310129, 0310136) are provided in Appendix E. Quality control sample results are discussed in the Quality Control Summary Report (QCSR) in Appendix F. No quality issues were identified; these data are considered usable for the purpose of meeting project data quality objectives. That is, these data are adequate to determine whether contaminant concentrations remaining in the soils at SWMU 11 exceed CAOs.

The analytical results for all five sites indicated that residual concentrations for all contaminants were far below their respective CAOs. In fact, in the sewage pond, neither benz(a)anthracene nor benzo(b)fluoranthene were detected at concentrations above the MDL. At the laundry effluent pond, the highest concentration of bis(2-Ethylhexyl)phthalate, 2.5 mg/kg, was detected in a sidewall sample nearest the original location of the outfall pipe. This concentration was an order of magnitude below the CAO. Lead and arsenic concentrations in the waste pile confirmation samples were all significantly below the CAOs.

#### 4.4 Hazardous Waste Determination and Disposal

During the planning phase of this project, North Wind developed a Hazardous Waste Determination (HWD) in accordance with the requirements of 40 Code of Federal Regulations (CFR) 262.11, "Hazardous Waste Determination" and Utah R315, "Environmental Quality, Solid and Hazardous Waste." The HWD provides detailed documentation of the process that was followed to classify the generated waste and to determine proper management, transportation, and disposal practices (Appendix G). Representatives of the TEAD Environmental Office reviewed the HWD and approved the associated waste material profile sheet prior to the start of excavation activities. The waste material profile sheet included both the soil waste stream and secondary waste streams (i.e., used personal protective equipment and plastic sheeting) so that all waste material could be transported and disposed of together in bulk loads. The disposal company, Clean Harbors, also reviewed and approved the profile prior to the start of fieldwork.

Based on a description of generating processes and previous sampling results summarized in the RAP (AEEC 2002), there was no indication that any volatile organic compounds (i.e., trichloroethylene) were present at this site. The waste material from the SWMU 11 site was not known to contain any listed hazardous waste, as defined in 40 CFR 261 Subpart D, "Lists of Hazardous Waste." Furthermore, there was no knowledge that Toxic Substances Control Act-regulated constituents were released to SWMU 11.

Table 3. Summary of SWMU 11 Laundry Pond confirmation sample results.

Excavation Area	Location ID	Field Sample ID	CAO (mg/kg) bis(2-Ethylhexyl)phthalate	Result (mg/kg) bis(2-Ethylhexyl)phthalate	MDL (mg/kg) bis(2-Ethylhexyl)phthalate
Laundry Pond	SWMU11-CS-01	S11LP-03-CNF-A1	78	0.116	.063
	SWMU11-CS-02	S11LP-03-CNF-A2	78	0.472	.0683
	SWMU11-CS-03	S11LP-03-CNF-A3	78	0.136	.0629
	SWMU11-CS-04	S11LP-03-CNF-A4	78	0.585	.0678
	SWMU11-CS-05	S11LP-03-CNF-A5	78	0.124	.0674
	SWMU11-CS-06 <sup>a</sup>	S11LP-03-CNF-A6	78	U	.0682
	SWMU11-CS-07 <sup>a</sup>	S11LP-03-CNF-A7	78	2.530	.322

a. Two additional sidewall samples near the original outfall pipe were requested by the USACE.

Table 4. Summary of SWMU 11 Sewage Pond confirmation sample results.

	Location	Field Sample	CAO (mg/kg) Benz(a)anthracene	Results (mg/kg) Benz(a)anthracene	MDL (mg/kg) Benz(a)anthracene
Excavation Area	ID	ID	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene
Sewage Pond	SWMU11-CS-29	S11SP-03-CNF-A1	2.2	U	.0425
			2.2	U	.085
	SWMU11-CS-30	S11SP-03-CNF-A2	2.2	U	.0451
			2.2	U	.0903
	SWMU11-CS-31	S11SP-03-CNF-A3	2.2	U	.0443
			2.2	U	.0887
	SWMU11-CS-32	S11SP-03-CNF-A4	2.2	U	.0406
			2.2	U	.0813
	SWMU11-CS-33	S11SP-03-CNF-A5	2.2	U	.0408
			2.2	U	.0816

U = Non-detect as result is below MDL.

Table 4. (continued).

	Location	Field Sample	CAO (mg/kg) Benz(a)anthracene	Results (mg/kg) Benz(a)anthracene	MDL (mg/kg) Benz(a)anthracene
Excavation Area	ID	ID	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene
	SWMU11-CS-34	S11SP-03-CNF-A6	2.2	U	.0407
			2.2	U	.0814
	SWMU11-CS-35	S11SP-03-CNF-A7	2.2	U	.0414
			2.2	U	.0828
	SWMU11-CS-36	S11SP-03-CNF-A8	2.2	U	.0443
			2.2	U	88.7
U = Non-detect as result	lt is below MDL				

Table 5. Summary of SWMU 11 Waste Pile confirmation sample results.

	Location	Field Sample	CAO (mg/kg) Lead	Results (mg/kg) Lead	MDL (mg/kg) Lead
Excavation Area	ID	ID ID	Arsenic	Arsenic	Arsenic
Waste Pile 1	SWMU11-CS-21	S11WP1-03-CNF-A1	1,800	2.88	.00154
			32	U	.00154
	SWMU11-CS-22	S11WP1-03-CNF-A2	1,800	3.06	.00169
			32	1.79	.00169
	SWMU11-CS-23	S11WP1-03-CNF-A3	1,800	2.75	.00176
			32	3.73	.00176
	SWMU11-CS-24	S11WP1-03-CNF-A4	1,800	2.84	.00152
			32	2.23	.00152
	SWMU11-CS-25	S11WP1-03-CNF-A5	1,800	2.51	.00151
			32	2.11	.00151
	SWMU11-CS-26	S11WP1-03-CNF-A6	1,800	3.24	.00157
			32	2.82	.00157

Table 5. (continued).

	Location	Field Sample	CAO (mg/kg) Lead	Results (mg/kg) Lead	MDL (mg/kg) Lead
Excavation Area	ID	ID	Arsenic	Arsenic	Arsenic
	SWMU11-CS-27	S11WP1-03-CNF-A7	1,800	3.65	.00162
			32	1.73	.00162
	SWMU11-CS-28	S11WP1-03-CNF-A8	1,800	2.72	.00151
			32	3.53	.00151
Waste Pile 2	SWMU11-CS-13	S11WP2-03-CNF-A1	1,800	2.41	.00157
			32	4.20	.00157
	SWMU11-CS-14	S11WP2-03-CNF-A2	1,800	28.0	.00157
			32	6.40	.00157
	SWMU11-CS-15	S11WP2-03-CNF-A3	1,800	2.57	.00161
			32	3.42	.00161
	SWMU11-CS-16	S11WP2-03-CNF-A4	1,800	7.12	.0017
			32	5.53	.0017
	SWMU11-CS-17	S11WP2-03-CNF-A5	1,800	2.74	.00152
			32	3.96	.00152
	SWMU11-CS-18	S11WP2-03-CNF-A6	1,800	10.3	.00159
			32	6.77	.00159
	SWMU11-CS-19	S11WP2-03-CNF-A7	1,800	2.30	.00157
			32	3.24	.00157
	SWMU11-CS-20	S11WP2-03-CNF-A8	1,800	2.24	.00153
			32	4.48	.00153

Table 5. (continued).

	Location	Field Sample	CAO (mg/kg) Lead	Results (mg/kg) Lead	MDL (mg/kg) Lead
Excavation Area	ID	ID	Arsenic	Arsenic	Arsenic
Waste Pile 3	SWMU11-CS-08	S11WP3-03-CNF-A1	1,800	3.31	.00155
			32	5.89	.00155
	SWMU11-CS-09	S11WP3-03-CNF-A2	1,800	3.18	.00154
			32	4.62	.00154
	SWMU11-CS-10	S11WP3-03-CNF-A3	1,800	3.97	.00153
			32	3.26	.00153
	SWMU11-CS-11	S11WP3-03-CNF-A4	1,800	2.53	.00152
			32	4.45	.00152
	SWMU11-CS-12	S11WP3-03-CNF-A5	1,800	3.11	.00155
			32	5.18	.00155
U = Non-detect, result i	s below MDL				

To evaluate the potential for toxicity, the sites were characterized for disposal purposes prior to the start of excavation. In August 2003, North Wind collected representative samples from the areas to be excavated. The sampling strategy selected by the USACE, in consultation with the Utah Department Of Environmental Quality, was to divide the excavation area into a number of grid blocks, each containing less than 85 yd³ of soil in place. Five-point composite samples were then collected from each grid block at multiple depths using hand augers. Sample collection and compositing were performed according to SOP 3.0, "Surface and Shallow Subsurface Soil Sampling" and SOP 3.2, "Composite Sample Preparation" from the TEAD CDQMP (USACE 1999). The soil characterization samples were submitted for analysis by EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (EPA 1996c) and EPA Method 6010B, "Inductively Coupled Plasma-Atomic Emission Spectrometry" (EPA 1996a). The resulting analytical results from each sample represented the average leachable concentration of metal contaminants within a given grid block. To determine whether the waste would contain a characteristic hazardous waste, the results were compared to the Subpart C toxicity characteristic values in 40 CFR 261, "Characteristics of Hazardous Waste." It was concluded that waste to be removed from the SWMU 11 excavation areas would not carry any characteristic waste codes (i.e., the soil would be non-regulated).

A total of 864 tons of waste soil was profiled, transported, and disposed of as non-regulated waste at the Clean Harbors Grassy Mountain, Utah facility. Copies of the manifests, profiles, and disposal certificates are included in Appendix G.

#### 4.5 Site Restoration Activities

After concurrence with the USACE and TEAD that the project objectives had been met, North Wind graded each of the excavation areas to match local topography. The laundry pond and sewage pond excavation areas were also covered with erosion control biomats to comply with requirements of the RAP (AEEC 2002).

#### 5. ATTAINMENT OF CORRECTIVE ACTION OBJECTIVES

The objective for the SMWU 11 remediation was to remove contaminated soil that could pose a potential risk to TEAD personnel, as discussed in Section 3.1. To achieve this objective, North Wind excavated and disposed of contaminated soil from specific areas within SWMU 11 as prescribed by the USACE. Confirmation samples were collected and analyzed to measure residual levels of contamination. The resulting analytical data were validated and determined to be of sufficient quality to meet the corrective action and data quality objectives of the SWMU 11 site.

#### 6. QUALITY CONTROL MEASURES

The SWMU 11 remediation work was completed in accordance with plans and procedures for chemical sampling and analysis, safety and health precautions, soil removal, and waste disposal. During the preparatory phase of the project, North Wind personnel carefully analyzed the requirements for successful completion of the work. Key documents included the RAP (AEEC 2002), the TEAD CDQMP (USACE 1999), and the USACE Safety and Health Requirements Manual (EM 385-1-1). Specific requirements from these documents were incorporated into implementing plans such as the SSHP and the CQCP, as described in Section 4.1.

In addition to up front identification of requirements, North Wind prepared for the project by selecting qualified project personnel, conducting training as necessary, and fully briefing all members of the project on the scope, objectives, and requirements necessary for a successful project. A substantial amount of time was expended scheduling suppliers and services to ensure the necessary tools, equipment, and support would be available to complete the fieldwork as planned.

North Wind contracted an analytical laboratory that had been previously certified by the Utah Department of Environmental Quality and validated by the USACE to perform the analytical work in accordance with the CDQMP (USACE 1999). The North Wind project chemist interviewed laboratory representatives prior to start of the fieldwork to ensure that they understood all the requirements and were prepared to deliver the specified product. An independent data validator was also contracted by North Wind to review the analytical results and methods in accordance with "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (EPA 2002), "Contract Laboratory Program National Functional Guidelines for Organic Data Review" (EPA 1999), and the TEAD CDQMP (USACE 1999). Analytical quality control, including the data validation report, is discussed further in the QCSR (Appendix F).

During the implementation phase, a dedicated field team leader (FTL) was on-site at all times and was responsible for directing the work to meet all quality requirements. The FTL inspected all aspects of the excavation, sampling, and waste transport activities to ensure the work was performed as required. The FTL also documented activities, measurements, and times in a detailed logbook and kept a photographic record of the work. Particular effort was made to accurately record the excavation dimensions and locations of the confirmatory samples. Sample locations were marked using pre-labeled wooden stakes driven into the ground. Finally, a Utah licensed surveyor recorded the excavation dimensions and sample locations and reported the data in a standard, controlled format. Sample locations and chemistry data were subsequently archived in the USACE Automated Data Review system. By applying the USACE quality control system to this remediation work, North Wind ensured that all federal, state, and project specific requirements were met and that the work was completed in a timely manner within the fixed price established by the USACE.

#### 7. REFERENCES

- 29 CFR 1910.120, 2002, Title 29, "Labor," Part 1910, "Occupational Safety and Health Administration," Subpart H, "Hazardous Materials," Section 1910.120, "Hazardous Waste Operations and Emergency Response," *Code of Federal Regulations*, Office of the Federal Register.
- 29 CFR 1926.65, 2002, Title 29, "Labor," Part 1926, "Safety and Health Regulations for Construction," Subpart D, "Occupational Health and Environmental Controls," Section 1926.65, "Hazardous Waste Operations and Emergency Response," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 261, Subpart C, 2002, Title 40, "Protection of Environment," Part 261, "Identification and Listing of Hazardous Waste," Subpart C, "Characteristics of Hazardous Waste," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 261, Subpart D, 2002, Title 40, "Protection of Environment," Part 261, "Identification and Listing of Hazardous Waste," Subpart D, "Lists of Hazardous Waste," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 262.11, 2002, Title 40, "Protection of Environment," Part 262, "Standards Applicable to Generators of Hazardous Waste," Section 262.11, "Hazardous Waste Determination," *Code of Federal Regulations*, Office of the Federal Register.
- AEEC, 2002, Final Remedial Action Plan, SWMU 11, Laundry Effluent Pond and Waste Pile Areas, American Environmental and Engineering Consultants, L.C., (AEEC), December.
- Dames & Moore, 2000, "Final Planning Documents, Known Releases SWMUs, Corrective Measures Study Work Plan," Tooele Army Depot, Utah.
- Dames & Moore, 2001, "Final Known Releases SWMUs 3, 11, 25, and 30, Corrective Measures Study Report," Tooele Army Depot, Utah, December.
- EPA, 2002, "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," Final, U.S. Environmental Protection Agency, Office of Solid Waste, July 2002.
- EPA, 1999, "Contract Laboratory Program National Functional Guidelines for Organic Data Review," Final, U.S. Environmental Protection Agency, Office of Solid Waste, EPA540-R-99/008, October 1999.
- EPA, 1996a, "Inductively Coupled Plasma-Atomic Emission Spectrometry," EPA SW-846 Method 6010B, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996b, "Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry," EPA SW-846 Method 8270C, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996c, "Toxicity Characteristic Leaching Procedure," EPA SW-864 Method 1311, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.

- NIOSH Publication No. 85-115, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Areas, October 1985.
- Rust E&I, 1995, Final RCRA Facilities Investigation Report Phase II Study Known-Releases SWMUs, Tooele Army Depot North Area, Tooele, Utah.
- TEAD, 2001, Resource Conservation and Recovery Act (RCRA) Corrective Action Permit, Tooele Army Depot, Utah.
- USACE, 1999, *Chemical Data Quality Management Plan*, Tooele Army Depot, Utah, SIOTE-CO-EO, Revision 2, United States Army Corps of Engineers, June 1999.
- USACE, Engineer Manual (EM) 385-1-1, *Safety and Health Requirements Manual*, United States Army Corps of Engineers, September 3, 1996.
- USACE, Engineer Regulation (ER) 385-1-92, Safety and Occupational Health Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) Activities, United States Army Corps of Engineers, September 1, 2001.
- Utah R315, Utah Administrative Code, Title 315, "Environmental Quality, Solid and Hazardous Waste," January 2001.

# Appendix A Installation Permits

North Wind, Inc. SWMU 11 CMCR

# APPENDIX A EXCAVATION PERMIT

(Proponent Agency is Installation Support Division) (THAD-R 420-16)

EXCAVATION REQUESTED BY ACAN ACM STrong PHONE 208-528-8718 X 115
LOCATION OF EXCAVATION SWMU-11 fax: 208-528-8714
PURPOSE OF EXCAVATION Corrective measures removal action
NAME OF DIRECTOR TO NOTIFY THAT EXCAVATION IS TAKING PLACE IN OR NEAR A BUILDING OR FACILITY UNDER THEIR RESPONSIBILITY
NOTIFICATION SHALL BE MADE 24 HOURS IN ADVANCE
BASED UPON DRAWINGS AVAILABLE AND PERSONAL KNOWLEDGE OF THE AREA FOR WHICH I AM RESPONSIBLE, THE SITE IS FREE OF UNDERGROUND FACILITIES OR SYSTEMS EXCEPT AS NOTED:
REALITY SPECIALIST-BLDG 501 De lu 5/13/03
FACILITIES SUPPORT DIVISION-Bldg 516 Thomas Man 5/13/43
COMMUNICATIONS CONTRACTOR-Bldg 10 7 5/13/03
COAXIAL CABLE MANAGER-Bldg 10 Aftitle 04 5/13/03
ENVIRONMENTAL OFFICE-Bldg 8 / Am Danitat 5-12-03
SAFETY OFFICE-Bldg 400
Confirmation Number
INSTALLATION SUPPORT DIV-Bldg 501
NOTE: THIS PERMIT IS TO BE COMPLETED AND ATTACHED TO THE WORK ORDER PRIOR TO THE WORK ORDER BEING ISSUED.
AFTER HOUR EMERGENCIES? CALL 833-2304 or 833-2015
EXCAVATOR MUST HAVE A VALID PERMIT IN POSSESSION BEFORE/DURING EXCAVATION
SMATE Form 2782~R (Rev) Feb 02 (Previous edition obsolete)
DRAIN lines in Digging AREA. FOR TOM MADSEN
FROM TODE le Army
Doct

# Appendix B Field Logbook

North Wind, Inc. SWMU 11 CMCR



# ALL-WEATHER ENVIRONMENTAL FIELD BOOK

Name _	NORTH WINE, INC
Address	SYS SHOUP
Iù	SAHO FALLS, ID 83405
Phone _	208-557-7855
Project _	TOOGLE ARMY DEPOT SWALL
11	SITE CORRECTIVE ACTION.

This book is printed on "Rite in the Rain" All-Weather Writing Paper - A unique paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

Specifications for this sock

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- 354 Conversions (Longer, Wasgh), Volume, Temp. etc. ).
- 193 Consession Concentrations, volume/Flow or Time, Verbolty, Appropriation
- 156 Maximum Concentration of Contaminators for the Taxonty Observationalic

2 Location TEAS STURY ( Date 19 Aug 05 Project/Client USACE - TOOSEE PARMY DEPOT 19 AUG 03 0700 COAD OF IN T.F. TO 60 TO TEAD. 14-20 ARRIVE AT SWMULL LAUNDRY MONDS. WILL COLLECT THE INT WILL OULLECT THE FIRST SAMPLE IN THE LAWWORY GEFLAENT POND THE FIRST SAMPLE WILL BE A COMPOSITE SAMPLE INTERDO TO REPRESENT THE SOLL IN AN AREA ABUT 17X17 AT AND 2 FT DEEP. THE SECONDSAMBLE WILL BE A COMPOSITE SAMPLE CELLECT FROM ABOUT 2,5 AT DEPTH IN THE LAUNCRY EFFLUENT POND MENT OVER AND SIGNED OFF ON SSAP - ( GRAN GRANTRONG) AND ZOM MATZEN

Project / Client

1500 COLLECT CHANCEY EFFLUENT AOND STRATE A WASTER OF CO - Z FAT WASTE CHARACTERIZATION SAMPLE AS A SPOINT COMPOSE RAMAING IN ECOTA FROM SURFACE TO 1.5 FT. SPMILE # 16 SILEP-93-COR-SOUL IS REPOUR DEWING 1-1-1 SAMPLE COLLECTED VIA HAND PURER 1510 COLCECT SAMPLE # SHEP-03-CHR- AT-1 8/15/6 · SULP-03-CHP-BI-1 FROM STRATA O' IN SWMW-11 LAUNDRY REFLUENT POND. THIS SAMPLE ( A S SPOT COMPOSITE COLLECTED FROM A DEPTH OF 2 5 FT VIR HAND AUGER ACL COMPOSITE SAMPLES WERE COLLBITED BY PLACING THE S INB SAMPLES HU (ABOUT 250 CCS EACH)

IN AN ALUMNAM PAN (NEW) MINNO

Location SWMU-11 L.R. Postopate 8/19/03 Project / Ollens THOROLOGICY WITH A CLEAN STAINFRE STILL SPOON, AND THEN PHYING THE SAMPLE BOTTLE WITH THE MIXED SOIL SOIL IN STRATA B' IS TAN, SANDY, SLISHTLY MOUT

Location SWMMIN L. 6. POND Date 8/19/05 Project / Client 1000 SUBS C-115 F7 0, Suby SWAU- ! LAUNDLY EFF POND

Location Swmus I L. E. POND Date 5/19/03 6 Project / Client

Location TEAD SWMU-/ Date 8/19/03
Project / Great Project / Client MOSTLY MINER & W/ TAACE MOUSTURE WEATHER - CLEAR, 90°F WIND FROM SOUTH COMPOSITE SAMPLES COLLECTED 4-E DEAR IND CREED 24

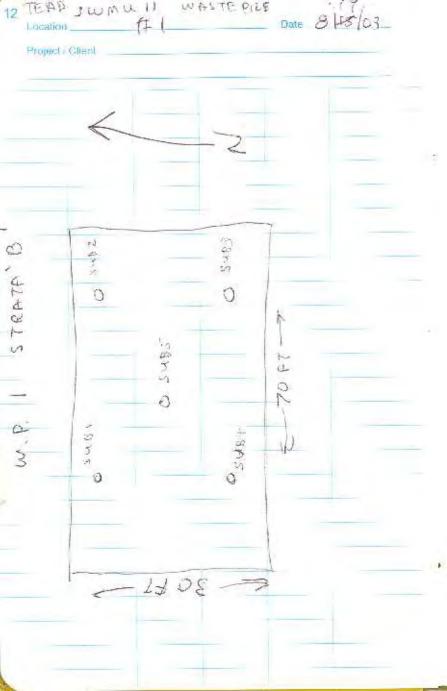
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10 LAURES SPURE POUL Location Project / Client

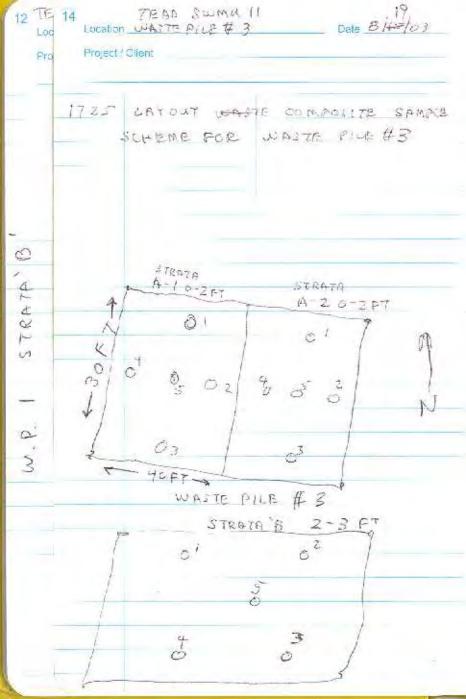
Project / Client \_

16 30 - PULL OVER TO WASTE FILE AREC # 1 - AND COCATE OND FRAG CORNERS AND CENTERS OF ALL THREE WASTE PILES 1700 LAY OUT COMPOSITE SAMFIE SCHEME IN WASTE PILE ( SEE BELOW - 70 FT -> GRIDO A-1 GEID A-2 m b-1 STRETA A DIVIDED W.P. / INTO TWO 30 X35 FO MOCKS FOR STRATA A. STRATAS WILL DE SAMPLED AS ONE

30 x 70 FT MOCK AT 2-5 FT DEPH



TEAD DWING H SEATT Date 8/105 13 Location 12 Project / Clent \_ 1715 LAY OUT COMPOSITA SAMPLE SCHEME FULL WASTE ALE #2 DIVIDED WASTE FOR \$ 2 1370 2 25 120 FT BLOCK! BHY COLLECTED A COMPOSITE SAMPLE FROM ERCH OF THE TWO BLOCKS 372ATQ STRATA 0-2 FT A 1 0-2 FT A 2 1000 5 45 1 242 STRE 2342 + 346 Sanz 0 0 Sup 3 3453 50 FT . WASTE PICE \$ 2 STRATAR 2-3 AT 1200 S NO 2 3485 5454 5483



Project / Client \_\_\_\_\_

1735 COLLECT SAMPLE # 511 WP2-03 - CHR- A1-/ FROM WEZ COULECT SAMPLE AS A 5 - POINT composite - DUB SAMPLE ASPTHS RANGENE FROM 0-2 FT BCS SOIL IS ATZ SAND, UY FINE PECUAL. SMALL ANGLAT OF CREAKE MATTER IN TOP 2-3 IN THEN BECOMES CLEAN SAND UERT DRY TO TRACE MOISTURE WITH WORRESED DEPTH NO DISCOCORATION - SEC DRAWN DN P-13 FOR REUNTING SUBSAMPLA COCATIONS 1740 COLLECT SAMPLE # STIWP2-03-CAR-A2-1. JAMPLE COLLECTED AS PESCATEED ASCIE. SAIL IS AS ABOVE . WEATHER IS CLEAR, 93 9F, WING S-16 KT FROM SOUTHWEST. COLUBETED FROM WP. # I 1755 COLLECT SAMPLE A SII WP2 + 03 - CHR - BI - / , SAMPLE COLLECTED AS & S DOWN COMPOSITO FROM 2-3 FT DEPTH IN WHETE PILE # 2 SEE P13 FOR SUBSEMPLE EQUITION DRAWING.

S Location	Date	
Project / Client		
2008.		
		_
	_	
		-

Project / Client

0750 CELLECT SAMPLE # 311WP1-03-CHR-AI-1 ASA 5- POINT COMPOSITE LISTING A HAND AUGER. THE 5 SUE SAMPLES WERE COLLECTED AT DEPTAL KANGENUS FROM 0-2 FT. SOIL IS A FINE GTZ SAND W/A SMALLAMERY OF ORGANIC MATTER IN THE TOP 2-3 INCHES. SOIL IS UERT DER WENTHER IS PARTLY CUCUDY WIND 10-15 FROM SOUTH, 85 F A ORAWING OF THE S SUBSAMPLE LOCATIONS IS PROVIDED ON P/1. THE COMPOSITE SAMPLE (AND ALL POLICELING COMPOSITE SAMPLES) WERE COLLECTED AS DESCRIBED ON PSANCY. COCC COLLECT SAMPLE H SIMP1-03-CHR-A2-1/ ASA 3 POINT COMPOSITE USING A HAND AUGER. THE 5 SUBSAMPLES

WERE COLLECTED AS D FROM 0-2 FT

TEADEWAU 18 STE PILE / Date 8/20/03 Project / Client RGS SOIL IS AS DESCRIBED ABOUTE SEE DRAWING ON P 11 0810 COLLECT SAMPLE # 511 WP1-03-CHR-BI-1 AS A 5 POINT COMPOSITE THE 5 SUBSEMPLES WERE COLLECTED ATA DEPTH OF 2 5 FT. BCS. SAN COMPOSITIVE USAS BONEAS DESCRIPED ON PP 3 BOOK SEE DEALING ON P. 12 FOR RELATIVE COCETIONS OF THE SUBSAMPLES

TEP 0 SUMU-11 Date 8/20/03 Location Project / Client

SHOULEST SAMPLE #

SHOWN COMPOSITE. THE 5

SHESAMPLES WEEK CHELECTED BY DEPTHS

RELATION PAGE 14 FOR

RELATION POSITIONS OF THE STAD

SHAPLES SHAPLE WAS COMPOSITED

BY DESCRIBED PREVIOUSLY.

SINDES OF CHR-A2-1 AS A

SINDES OF CHR-A2-1 AS A

S-ROINT COMPOSITE. THE S

SUBSAMFLES RANGE AV DEPTH FROM

1-2 PT 663. SEE DEPLING ON

P-14 FOR RELATIVE SUBSAMPLE

POSITIONS

DEST COLLECT SAMPLE A

SILVED - 03 - CHR - BI-1 BS A S
POINT COMPOSITE. THE 5 SHE SAMPLES

WERE COLLECTED AT A DEPTH OF 2.5

FEET. SEE DRAWING ON P. 14

Location Scei by 4-11 Date 8/20/032 Project / Client WASTE PILES ARE WEST OF BCDS 1270. THERE IS A FIRE HTORRAT CLOSE TO BLOG 1270 CONTRACTOR INSPECTOR (S ROBERT REPPER 1035 LEAUING WASTE PELF PREA OF SWMU-11,

LOCATION TEAD SOUTH U-\$11/000 9/3/03 22 Project / Client 1000 APRILE AT SWELL-11 AFTER COMPLETING HAZ WASTE OLDSS (TEAD) SET UP TO DO ACCATIVE ELEVATION SURJEY PRE EX CAVATION OF WASTE PILE #2

Location TEAD SWMW- 1 Date 9/3/03 23 Project/Client USACE/ TEED WASTE PILE + 2 5.78 BACKSHOT FROM EAST EMP 00 + TO CL 10 Tu 9/3/03 120 +30 140 1 DUBTERS MORE SMITSHITE CL 10 RT 10 CFT 00+ 10 3.95 4.22 3,81 5,37 511 5,10 +20 5.64 5,50 130 5.56 5,34 \$102 740 5115 17/15A WPZ ELTT 30 40

Location (FAD gas mu-1) Date 8/3/03 Project/Ollent U.SA.CE / TEAD 1110 SET UP TO DO PRE-EX RELETION ELEVATION SURVEY ON WASTE PILE 1. WILL DO RELATIVE GROWN DEUR 5 FT RICHT AND 5 FT CEFT OF CL 1830 FINGSH AT WO E/

Location TERD Swmw-11 Date 9/3/43 USACE / TRAD Project / Chart WP-/ BACKSHOT 5,98 FROM EAST END 10/20/67 5.75 FROM CL SFIRT STET LEFT 6,54 00+10 120 6,60 6.60 130 4.59 6.54 C. 65 +40 4 75 7.06 +50 7,15 7.12 160 30 20 TIC RIKEST LEFT

26 Location TEAN SOURCE-11 Date 7/3/03 Project / Client CACA 1140 SET UP ON WP#3

Location TEAS COUNTY 1/ Date 9/3/05 27 Project / Client CSACE WP # 3 BACKSHOT = 8,48 FROM EAST END DE DIGARER S FT CEFT FROM C.L. 5 FT RT 4,98 4.62 00+10 4,80 4.85 720 4,24 4.38 130 10/15/03 DACKSHOT = 8,25 CIFF = +.23 577 (1277 5 FTRT 6,62 04+10 6175 00 + 2U 6,60 6.80 6,24 and 30 6615

LOCATION TEAD SWMY-11 Date 9/3/03 28 Project / Client \_\_\_ 1430 SET OF AT LAGROY SEWER POND TO OBTAIN PRE- EX RELATION G. L.

Location TEAD SWMU-11 Date 9/3/63 29 Project/Client USACE CAUNDRY SEWER POMD BACK SHOT = 5.24 STARTING AT SOUTH END 3 RTOPCL 5 CATOFCL 00+10 5.47 5.40 +20 5,36 5,32 5,10 130 5.30 5.46 440 5,45 £50 5.58 5:50 30 470 R PICK T LEPT

30 Location TEAO Sumu-11 Date 9/3/03 Project / Client \_\_\_\_\_ U.SACC\_\_\_ 1500 SET UP AT LAUNDRY EFFLUENT POND AT SWMO-11 TO ESTABLISH RECOTIVE PRETEX

Location TEAL SWMU 1/ Date 9/3/63 31 Project / Client USACE LAUNDRY EFFLUEND POND BACKSHOT = 3,84 4,70 +0,80 10/14/03 = CENTER OF EX CAUATION AREA = 7.28 77.00 10114

32 Location 7EAD SWMUII Date 10/13/03 Project/Olient USACE 0700 LOPE UP EQUIPMENTAT STORAGE UNIT AND HEAD DOWN TO TEAD 1200 ARRIVE TOOKLE, 1330 OUT TO TEAD START STETTING UP EQUIPMENT AND WORK AREAS. 1430 1000 POD MTG, HASP TRAINING - DO EQUIPMENT INSPECTIONS. 15-45 SET UP WORK ARE AROUND SHU SWMU !! LAUNDRY EFF FOND. 1660 START CONTOBRINE SCOPES AND LOWERING BERM AROUND LAUNDRY EFF. POND. 1800 PLACE ABOUT SOO GALLORS Location 76AD SWMU-10/418 (0/13/09 33

Project / Client USACE

POR BUST SECURE ALL 1830 STOP	SUPPRESSION & EQUIPMENT FOR EVENING AMNO AREA	A
		Ī

34 Location TEAN SOUMU-11 Date 10/14/03 Project / Clent \_ CLSACE 0730 OUT TO AMME AREA ON TEAD, INSPECT EQUIPMENT AND GET ALOAD GEWATER 0 800 UP TO OF TEAD OFFICES FOR KICK OFF MEETING, GU OVER WORK SCHEDULE DISCUSS APPROACH, CARL COLG WILL BE OUT AS USACE TECH REP TO START WITH. HAB SOME DISCUSSION RELATED 70 1000 BACK DUN TO AMONO ARRA AND SWAY-IL LAUNDRY EFF PUNA CARI COLE-USACE CHECKS OUT AND APPROVED LOCATION OF ALL AREA IN CAUNDEY FFF PONOZ

Project / Client USAC @

1030 SEC UP TRUCK CORDING AREA WITH SOME PLASTIC SHEETING TO CATCH ANY SPICES 11:00 FIRE WA EQUIPMENT AND PREPARE TO BEGIN EXCAUATION IN CAUNCET EFF FOND 1130 CARL COLE PLACES HOL GP3 UNIT OUT OVER CENTER OF EXCAUATION AREA WILL CAT STABILIZE FOR 10 MINUTES. TRYING TO MAKE SURE DIE AREA () IN CORRECT LOCATION 13 55 CHECKING DIC MEASUGGIE HORIZONTAL IS ON TORSIT SIDES ARE 2 FT AS CENTER (S 2" SHALLOW

36 Location TEAD SWM4 11 Date 10/14/63 Project Client USPCB 1400 JUSTIN REMOVES ABOUT 4 MORE FROM CENTER OF EXCAUATION 14/15 FINISH UP EXCAUATION IT LAUNDRY EFF, POND INE ENDED UP FILLING UP 1. TRUCK FULL T ABOUT 12 FRONT LOADER BUCKET IN A BECOND TRUCK, 14 30 NO START MOULNE EQUIPMENT TO GOER TO RUBBLE PILE # 5 AND SETTING OF TO DE 1550 START EXCAUATING AT RUBBLE & PICE #3

Location 76AD SWMUII Date 10/14/43 Project / Client USACB 1020 LOADING TRUCK # Z AT W.P. 3 DIE SITE 1700 FINISH LOADING TRACK # 2. WE HAUE EXCAUATED ABOUT 1/4 OF W.P. #3 120 SECURE SITE BORTHE DAY Penas a. Majo 10/14/63

Location TEAD SWINE (1 Date / 15103 Project/Client \_ F C2SACF 700 ARRIVE WE #3 SET UP FOR WERE 0825 BEC CONTINUE EXPU-ETING UT WE #3 CE+O FILL # / ROLL-CFF BOX 0900 FILL # 2 ROLL-0 FF BOX WALT FOR MORE TRUCKS AND R.O. BOXES 10 55 START COADING 3RD TRUCK 1200 FINISH COADING 3RD TRUCK 1210 START WADING 3RD ROLL OFF BOX

130		TH AND ARE CO		
		TRUCK I		
141	Sa (	UD (AN # 2.		
1P#3	WP-H	ECKE D TEXC	EVATO	N CUSING
	NO TE	ALL KS COP	BINS A	NO
	CUERNO	100 F) (N) -	SPECTE AND L	O FOR
G		LIGAN STIC.		

TEAN SIEWELL WF 2 DATE 15 00703 40 Project / Chert USACE 1500 SETTING UP TO DIE ON WP#2 TRUCK# 4 13 FULL 1630 EXCAUATING AT W. F. # Z. 1705 TRUCK \$5 ARRIVES START FILLING TICUCIE # 5 1730 TRUCK # 5 (S FOLL 1745 1800 SECURE SITE FOR THE DAY FRANKE O IDE 1500703

Location Swima 11 TAN Date 160CTS 41 Project/Client ACC Run autry 1601743 0545 Arrived on 5 Tr. POD - safety invelving - Fineled equipment (Superior (enstruction) - Staged 12 truck for landing calm, worm -400 TRUCK # G ARRIVES 0710 START FILLING TRUCK #61 0735 FINISH FILLING &C TRUCK FROM WP#> PULL ST TRUCK TWEN COADING IT 0750 FINISH GORDING TRUCK # 7.

Longlian TEAD SWMW-11 WP2 Date 16 CCTO3 Project Client USACE WP#Z 0800 PULL TRUCK # 8 INTO CUADING AREA AND START LOADING IT COPE 1815 FINISHING LOADING 1035 TRUCK # 9 PULLS IN TO USADING AREA 1100 FINGS TRUCK # 9 1110 START COADING DINH ROLL OFF BOX #G WE LEFT IT C ON THE TRUCK AND ARE LOADING IT ON THE TRUCK 1120 DIN #6 (S FULL DRIVER 13 UNLCADING BIN #7. WE WILL EILL ROLL OFF DOX #7

Location TEAD SWMW-11 Date 16 00763 43 Project / Client USA CG WPFZ WHILE IT AS SITTING ON THE SROOW D 1140 FINISH FILLING DINA 1150 Paul TRUCK \$ 10 (NZO LCAC AREA 1220 FINISH COADING TRUCK # 10 1245 MOVE TRUCK # 11 INTO LOAD AREA AND START COADING IT. 1316 FINISH CORDING TRUCK # (10 1345 1315 MOVE TRUCK # 12 INTO COADING AREA AND START LONDING IT

44 Location TEAD SWM411 Date 10/16/63 Project Client WP FZ WSACE 1335 - FINIEH COADING TRUCK # 12 340 MOUS TRUCK # 13 INTO LCAD AREA AND START CORDING IT STILL LOBONE OUT OF WP # Z BUT ACMOST EINLIGHED 1350 FINGH EXC ATWPZ PREPARE TO START DIGGING AT WF #1 WP#1 14 m 10/16/67 4305 FINISH LCADING 7RUCK # 13 WOLE BY ROLL OFF BOX# & INTO ECADINE AREA AND START LOADING IT WITH SOIL FROM WP#1

Location TEAD 311111-11 Date 12/16/63 45

Project / Chent USACE

wf#(

1420 FINISH LOADING ROLL-OFF DOX # 8 1440 NO TRUCKS OR ROLL OFF BOXES FURLCABLE RIGHT NOW JUSTIN (S EXCAUATING IN WIFE AND WE ARE APPLYING WATER AS HE STOCKPILES TOR SOH WITHIN THE WASTE AREA. 1600 CEC CHECK DEPTH OF WP # Z EXCAUATION USING LASTE CAUEL, DEATH CHECKS OUT AT 2FT to 1600 RESEEDING - APRIL FONTHINE MUD FRED STRICKLANA SHA DA NOT RESCED SWALL 25 OF 11. ALSO ABO ABL CONF SAMPLES IN LAUNDRY AUND NEAR INFLUENT AIPE.

4 46 Location 7FAD SCUMUII Date 10/16/03 Project/Client USACC WP #/ 16.48 START COADING TRUCK #14 FROM WP#1 7 15 FINISH LEADING TRUCK # 14. START CORDING BIN # 9. 1720 FINISH COADING BIN # 8, 1725 START COADING BIN 1735 FINISH LEADING BIW# 10

Date 10/17/03 47 Location \* EAO Project / Client Swand | 0700 Arrived on site ADD - land 5 boxs, sample Warm 20 ment MPE arrived w/ 2 New bins 5 TO INJUGAT EQUIPMENT AND WARMIT UP. START LEADING ON # (1. 6745 FINISH CHARING BINS# (1 0755 CECU TRART LOADING BINHIZ CB15 FUNISH CORDING OM#12 0830 LEFT VV WY HELGE GABORT Rt: SAMPLINE SCHEDULE. HE IS OUT OF CHILE TILL MENDAY REX LIGHT RELEPTIONIST. WILL SAMPLE EFFLUENT

48 Location 7E 4D Data 10-17-63 Project Client Burner 11 14 166 WP #3 0430 AND, WASTE PILES 283 CONT. TODAY AND REMAINING 2 SITES NEXT TUESDAY LEFT INFO ON HE VIM - OUT DESD CONTINUED MIXING/WETTING WP #1. PRE WET SEWAGE DONA -WRITING FOR MORE GINS 1025 START LOADING BIN# 13 16 35 FINESH LEADING DIN#13 START GOADING DIN # 14 10 +0 FINISH COADING BIN + 14 1000 吸的物件 1100 MOBED EX TO LAWADRY CFFLUENT PONT TO PREMIX WATER SOIL FOR DUST CONTROL 1-10 START COLLECTING CONFIRMATION SAMPLES

Location SLUMU-(1 Date 10-17-03 Project/Client COSIACE STUMM-11 I SEE SAMMUNE FOR STARTING ON PAGE 110) L 400 PINISH SAMPLING, SECURE SITE 1500 LEAUG TEAD,

50 Location TERO SLUMM-11 Date 10/20/07 Project/Clent SWMW7/ WSACE 0700 ARRIVE SWIM 11 W.P. #1 SITE, WARM UP EQUIPMENT GET WATER IN WATER TRAILER READJUST WORK AREA ROPES. LEY DUT WEW PLASTIC SHEETING (W LOADING AREA. 0710 M.P.E.ARRIVEL AND STARTE FICKING UP KE CEARED ROLL-OFF BEXES 0770 (ST TRUCK OF THE DAY ARRIVES AND BACKS 10070 COADING AREA - PLASTIC LIWER IS INSTALLED IN TRUCK THIS WILL BE THE ISTH TIZUER 0730 LARRY MUSARLAND COME BY TO SION MANIFESTS E795 START LOADING 15 TH TRUCK

Project / Client \_\_\_\_\_

OB FOIC SINISH LEADING
15 TH TEURICA
0824 BACK 16 TH TRUCK
INTO COAD ARFA.
0890 FINKER CEFDING CETH TRUCK
0 8 45 5 TART LOADING 17 TH TRUCK
OFFO FINISH LOADING (7 TH TRUE THIOLOGICA
0825 START COADING 18 TH
0950 FINUS CONDINC 18 TH
TRUCK FINISH EXC. AT
1000 SETTING UP TO CHECK

52 Location TESS SWM W-11 Date 16 7 0 3 Project/Client SWIMU- () SOUTH TO JACK CONT 1000 WING LASER LEVEL. LASER IS SET UPO, 25 FT LOW TODAY '020 ALL DEPTHTS CHECK OUT PIT IS ALL ZETT IN DEPTH. DECON EQUIPMENT 1030 ARAN MENTONED THAT HE HAD CALLED HELGE GABERT AT ABOUT 0900 TO SEE IF HELGE WANTED TO WITNESS ANY OF DOR CONFIRMATION SAMPLING, HELGE SALD THAT HE WELLD NOT BE ABLE TO GET DOLT TO TEAD THIS WEEK AND THAT WESHOULD 60 AHEAD WITH OUR SAMPLING ,

2000 Location 7 CAD SUSMU- (1 Date 10/10/0) 53 Project Client JUMU 11 CISACE 1030 MOVING ALL ROUP MENT OUBR TO LAUNDRI SEWER POND, 1115 START LOADING 19TH TRUCKE 1145 FINISH LEADING 18 7H TRUCK AND NOVE 20 TH TRUCK INTO COADING AREA. 1150 BEGIN LOADING 20 TH TRUCK 12/0 FINISH LOADING 20 TH TRACK THIS IS THE ETH TRUCK FOR TODAY WE WILL HAVE TO WAIT FORTHES MORNINGS TRUCKS TO GET BACK 1330 ZH ONE OF THE EARLY TRICIS FROM TODAY HAS RETURNED FROM GRASSY MOUNTAIN 1400 START LOADING 21ST TRUCK (7 TH LOAD TODAT)

Location TEAD Swmu-(1 Date 10/2003 Project Client Swmw-LI USACE 1420 FINISH GOADING 21ST TRUCK. 1425 22 NO TRUCK FULLS INTO LOADING AREA 1445 FMUH LOADING 22 NO TRUCK 1500 START COADING 23N TRUCK 1530 PINISH LOADING 23 RD TRUCK LAUNDRY SEWER PUND EXC. IS COMPLETE. TOO SECURE SITE FONTHE DAT

Project/Client Swinu-// UJACE

0-700 0720 DEGIVERSAMPLE COLLECTE O YESTERDAY FROM WP 1 TO MSA FOR PEANDAS ANALYSIS. 1000 START SAMPCINE FOR LAUNDRY SEWERPOND (SEE SAMPLE LUG ON P 116 1415 FEDEX DRUPOFF OF GA SAMPLES FOR SEVERN-TRENT LABS

Date 10/22/03 Location Swhite () USACE Project / Chent \_ S U M U - ( ) 0830 ARRIVE SITE, POLICE UP SITE START TAKING DOWN ROPED SUPPERT AREAS. 0836 SURUETCES ARRIUG PNO BEGIN SURVEVING EXCAUATION SITES, 1100 START RECONTOURNG EXCAUATIONS WE ARRONOT KNOCKING DOWN THE SHARD PROPORTS - NO BACKELL LS REQUIRED FOR THIS FOB 1230 SURVEYORS FINISHED UP AND CEPT. 12 50 FONISH RECONTOURING ALL EXCAVATIONS,

58 Location 7EAS SWRU = 11 Date 10/23/07 Project/Client Junital 11 4 SACS CEZU ARRIVE BT 7/45 Schma-11 CHUNGET EFF POND SITE START LAYING OUT LAST MAT. 0900 FINISH UP WITH ERWION CONTROL MATS, CLERN UP SITE 1030 LEAUS SITE.

Location TEAD Sama-1) LEF Date 10/17/03 Project / Client \_\_\_\_ USACE SAMPLING LOG 1210 START SAMPLESING AT LAUNDRY EFFLENT POND 1215 COLLECT SAMPLE AS SIILP-03-CNF-AI AND S11LP-03-CNF-A9 (D9 15 THE STL OA DUP) FROM CENTER OF EXCAUATION SEE MAP ON P. 111 THESE TWO SAMPLES WERE COLLECTED AS A COMPOSITE BY PURCING THE APPROPRIATE AMOUT OF MATERICAL IN AN ALAMINUM DAN (NEW) AND MIXINE THRROUGLY WITH A DECONNES STAINLECS STEEL SPOONS SOMPLES WERE IMMEDIATELY PLACED ON ICE. 1224 COLLECT SAMPLE #S SII CP-03-CMF-A2 AND SILLP-03-CNF-A3 FROM NORTH AND GAST SIDE WALLS RESPECTIVED Project / Client USACE

SWMU-11 CAUNDEY EFFLUENT POND M S11LP-03-CNF-AZ 05-02 LP-03-CNF-A 05-03 03-01 SIILP-03-CNF-AI SHLP- 03-CNF-A9 (STL QADUP) 05-07 -51149-03-CNF-A7 45-04 SILP-03-CNF-A4 m10/17/03 S116-63-CNF-A6 C3-06

112 Location	TEAD 3	11-2000a	LEP	Date 10	117/07
Project /	Client	ISACE	T		
	on sin	CEP FO	50m 110		
1224	SAMP	CES	COCCE	TEO	DS
	GRAB	SAMP	CESE	5016	15
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	CONTRO	oc) e	5010	15 p	EINE
279	SAND	HTIW	LITTL	R OR	CANIC
16	MATTE	R.	WEA	THER	15
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Location TERO SWMU-11 CEF Date 10/17/03 113

Project / Client \_\_\_\_\_ USACE

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114 Location TEAD Date 16-17-03 Project / Client Sumu 11 SAMPLING LOC WASTE PILE 3 1250 ata SETUP FOR CONF SAMPLING 360 AT INASTE PILE #3 1300 COLLECT SAMPLES A1 & A6 DON NEW GLOVES FOR ELEH SAMPLE, ALSO TYVEK BOOTIES AND LEVEL D PRE-PLACE SOIL INTO AT ata NEW AL BAKING PAN MIX THOURDERALL WITH SPOON (55 SPOON PREVIOUSLY DEZONNO) PLACES SOIL INTO TWO SAMPE BOTTLES AFEW ORAMS AT A TIME UNTIL BOTH ARE FILLED SAMPLE NOSE 5/1WP3-03-CNF-AI 1304 511 WP3-03-CNF-A6 (DUP 1304 FOR STL) SAMPLER = N. MAI MER ANAGYSISE TMET GOIDB 5 AMPLE DATE/TIME: 1700TO3/1304 TYPE: GARB MATRIX: 50/L CENTER BOTTOM LOCATION

Date 10-17-03 115 Project / Client Summ 11 SAMPLING LOG WASTE PILES WASTE PILES Samu 1 10 10 10 511WP3-03-CNF-AZ C3-09 511WP3-03 JENF-A5 511WP3-03-CNF-A1 \ \$11WP3-03 CS-12 -CNF-AR 511WA3-03-CNF-A6 CS-10 (STL DUP) 511 WP3-03-CNF-A4 SANDY SOIL, LITTLE ORG MATTER NO STAINING NO ODOR

116 Location Date 10-17-63 Project / Client Swww 11 WASTEPILE 3 SAMPLE LOG 1301 1300 are COLLECT SAMPLES (CONT.) SAME PROCEDURE AS BEFORE ara 511 WP3-03-CNF-AZ GRAB 1501L 10-17-03 /1301 TOTAL METALS GOIDB T- MATZEN NORTH SIDEWALL 511WP3-03-CNF-A3 1304 G-RAB / SOIL 10-17-03/1304 TOTAL MET 6010B N. MAINER EAST SIDEWALL 1306 511 WP3-03-CNF-A4 GRAB/SOIL 10-17-03/1306 TOTAL MET BOIDB N. MAINER SOUTH SINEWALL

118 Location TEAD Date 170LT03 Project / Client Swmel 1 WASTE PILE #2 SAMPLE LUL CONFIRMATION SAMPLING CNF-A3 CNF-A4 CNF-AS # # CNF-A5 C5-20 CNF-AZ CS-14 CNF-A7 CS-19 CNF-A6 CS-18 SILTY SAND, NO STAINING NO ODOR NO ORGANIC MATTER

Project / Client \_\_\_\_\_\_ Swma //

LASTE PILE # 2 SAMPLE LOC

COURT SAMPLES ALL SPOONS CLEANED WITH ALLONOX / DI RINSE IN SAMPLE TRAIER. NEW NITRICE GLOVES BE TWEEN CACH SAMPLE. LEVEL DPRE WITHUEK BOOTIES STAKED SAMPE LOCATIONS WI PRE LABETED WOVDEN STAKES. SPOONED SOIL DIRECTLY INTO JARS

120 Location Date 10-17-03 Project / Client \_\_ Sumu | U SACC WASTEPILE # 2 SAMPLE LOL COLLECT SAMPLES (UNT) 1330 54WP2-03-CNF-A1 CRAB SOIL 10/17/03 / 1330 TOTAL MET 5010 B T, MATTEN CENTER EAST BOTTOM 1334 511 WP2-03 -CNF-A2 GRAB SOIL 10/17/03 1334 TOTAL MET 5010B N. MAIMER CENTER WEST BUTTOM 1335 511WP2-03-CNF-A3 GRAB SOIL 10/17/03 1335 TOTAL MET 5010B T. MATTEN NORTH WEST SIDEW ALL

Location TEXALS	Date 10-17-03
Project / Client 50000 //	USACE
WASTE PILE # Z	SAMPE LOG
COLLECT SAMPCE	5 (cont)
1336 SIIWPZ-03-ONF	-A4
GRAB 501L	A second
10/17/03 1336	
TOTAL MET GO	1015
N. MainER	WATER BELLEVILLE
NORTH EAST SI	NEWIANI
	OCCURIC
1338 511 WP2-03-CN	F-45
GRAB SOIL	
10/17/03 1338	
TUTAL MET	E01018
T. MATZEN	979-
EAST SIDELLA	
773622	
1339 SILWPZ-03-CA	JF-A6
ara13 5012	
10/17/03 1339	
TOTAL MET GO,	1013
NMAINER	
SOUTH EAST SIDEW	0.411
300111 1711 9/1000	

122 Location TEAD Date 10-17-03 Project / Client \_\_\_\_\_ SW mull WASTE PILE #2 SAMPLE LOG 1340 511WP-03-CNF-A7 C-RAB 5014 10/17/03 1340 TOTAL MET GOIDB TMATZEN SOUTH SIDEWALL 511WA-03-CNF-A8 1341 GRAB SOLL 1917/03 1341 TOTAL MET GOIDB NMAIMER WEST SIDEWALL 10/12/03 Page

Project / Client Swnu II

SAMPE LOG

ALL SAMPLE CABELS COVERED WITH CLEAR TADE CUSTODY SEALS ON EACH aca JAR- ALL PALLAGED 121TH BUDBLE WRAP AND PLACED IN ZIPLOCKS IN SAME (SINGLE) QUOLER WITH ICE-ICE IS DOUBLE RAGGED. CUSTODY SEALS ON COOKER INSTEAD OF JARS PER USACE PAT CANTRELL-

124 Location TEAD SWMU-11 Date 10/2003 Project/Client TEAD SWMUII USACE. WASTE PILE #1 1400 COLLECT SAMPLE # SILWPI-03-CNEARO AS AN EQUIPMENT RINSATE, SAMPLE WAS COLUECTED BY POURING HPLC WATER INTO A NEW ALUMINUM SAMPLING PAN CONTAINING THE PECONNED STAINLESS STEEL SPOONS THAT WILL BE USED TO COLLECT THE GRAD SAMPLES (CONFIRMATION SAMPLES) FROM W.P. #1. THIS RINSATE SAMPLE WILLDE ANALYSED FOR PHAND AS. 1524 COLLECT SAMPLE #S SIIWPI-03-CNF-AI AND SII WP1-03: CNF-A9, A9 IS THE GADUP TO BE SENT TO STL. THESE SAMPLES WERE COLLECTEDBY COMPOSITING SUFFICIENT SOIL TO FILL BOTH JARS AND COLLECTED SAMPLES AS A SPLITE SOIL IS A FINE SILTY SAND, QTZ, WITH LITTLE ORGANIC MATTER.

Project/Client TEPD SWMW-11 USACE

4 5-2 4 11 WP1-03- CNF-A 70 FT 77 KK O 20

126 Location TERD SWMU-// Date 10/20/03 Project / Client USACE WEATHER IS & 77° F WOTH WIND FROM NW AT 5-10KN SAMPLE LOCATIONS ARE ILCUSTRAT ED ON P 125, SOIL 13 DR470 SCIENTUT MOIST, COLLECTED FROM E. CENTER OF EXC. 1537 COLLECT SAMPLE # SILWPI-03-CNF-AZ AS A GRAB SAMPLE BY SPOONING SUFFICIENT VOLUME OF SOIL TO FILL 802 TAR USING A CLEAN STAINCESS STEEL SPOONS SOIL (SAS DESCRIBED ABOUT. CELLECTED FROM WEST CENTER OF 1540 COLLECT SAMPLE # SILWPI-03-CNF-A3 AS A GRAB SAMPLE AS DESCRIBED ABOVE COLLECTED FROM N.W. SIDE WALL 1545 COCLECT SAMPLE # SIIWPI-03-CHEAT ASA CRABFROM NOVE SIDE WALL. 1550 COLLECT SAMPLE # SILWP1-03-CNF-A5 FROM EAST SIDE WALL OF BXC, SAMPLE IS A GRAP.

Project/Client Swma-11 USACE

1551 COLLECT SAMPLE # SILWPI-03-CNF-AC FROM SE SIDE WALLAS A GRAD 1555 COLLECT SAMPLE # SIT WP1-03-CNE-A7 FROM SW SIDE WILL ASA GRAB SAMPLE 1559 COLLECT SAMPLE # SILWPI-03-CNF-A8 FROM WEST SIDE WALL OF EXC AS A GRAD SAMPLE THIS SAMPLE AND ALL OF THE ABOVE WASTE PILE # [ SAMPLES WILL BE ANALYZED FOR PD AND AS 112)3

128 Location	Swm	u-11		Date /	0/21/03
	Client				1 11 -
1000	COL-1-6	SCT CA	MOIRS	fi Silso-	03-CNF-A10
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1053	COLLE	C7 SF	MPLE +	ts SIISP	-03-CNF-A1
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	SPCL	T. SAM	PLES CO	LLECTE	D FROM
	CENTER	OF	NEH	ALF.	
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	FTHE				

Location Swmu-11 5: P. Date 10/21/03 129 Project / Client SWMU-(1 / USACE

LAUWDRY 130 Location SWMU-11 SEWER POND Date 10/21/03 Project/Client\_SWMW-1/ USACE 1058 COLLECT SAMPLE# SUSP-03-CNF-A 3 FROM NW SIDE WALL, SOIL IS A FINE OTZ SAND WITH SOME SILT, YUBRT LITTLE ORGANIC MATTER PRESENT WEATHER IS CLEAR, 80°F, WIND FROM SEAT 0-5-KN COLLECT SAMPLE A SI(SP-03-CNF-A4 1100 AS A GRABFROM THE NE SIDE WALL 1105 COLLECT SAMPLE IF SIISP-03-CNP-AS AS A GRAB FROM ZH NE ENDWALL 1105 COLLECT SAMPLE # SUSP-03-CNF-A6 AS AGRAB FROM THE SESIDEWALL SO ME REDDISA STAINING EULDENTIN THE SOIL FROM WHICH THIS SAMPLE WAS COLLECTED. 1/08 COLLECT SAMPLE # SIJSP-03-CNF-AT AS A GRAB FROM THE SW SIDF WALL.

Location SWMU-1	LAUNDRY	SEWER	POND 16	121	03 131
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Project / Client	una-11	USACE

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140 Locatio	on TEAL	D SWMU 11 Date 10/14/03
	/ Client	
	PA	4070 206
#145	1115	Pian Ant Total Attack
11/3		CARL COLE, TOM MATZEN, AND
		JUSTIN MORGAN VERIFYING SITE
		EXCAVATION SIZE, LOOKING
14 4		TOWARD NORTHEAST.
#2	1255	TOM MATZEN@ DUST CONTROL
		WIJUSTIN OPERATING THE
	*	EXCAVATOR. LOOKING TOWARD
		THE EAST.
		3
#3	1600	STARTING EXCAUATION
44		W.P. # 5 LOORING
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F7		
#8		
49	11.26	DUST CONTROL AT
7110	00,0	, # 3
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#1)		SHUTTLING SOIL FROM
		REA TO TRUCK COOKING
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Location	Date 10 (14 6 341
Project / Client	

D 1625 LGADING TRUCK # 2. 10/15/03 3 0800 PHOTO OF NE TORNE STAKE WP # 3 14 OPOD PHOTO OF SE CORNEL STAKE OF WP#3 0800 PHOTO OF NW 15 CORNER STAKE OF WP#3 0800 PHOTO OF SW FORNBER STAKE WP#3 11 0630 LOADING A ROCK -OFF BOX AT WP # 3 COOKING NORTH 12 0645 A FILLED ROLL-OFF BOX AT UUP-3

142 Location	n			Date /	0(15(0)
	/ Client				
				25.00	
14	1200	A	INED	ROCC	-OFF
	B0)	CAT	u	P#3	5
15	13 115				
	LO:	AND IN	JR	.O, B	OX
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14.	1440	- S	HOT	08.6	OMPCETED
	W.P.	#3	EXCA	UATIO	N LOOKING
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17	1725	EXC	CAUA	TING	AT
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DEING APRIED FOR DUST CONTROC

144 Location Swmull wif #1 Date 10/20/03 Project/Client JEAD SWMUII USACE 77 0810 LOADING TRUCK #15 LOOKING SOUTH 28 0950- FINISHUP DIG AT WP # 1 AT SUMU 11 COOKING NF 29 1020 JUSTIN CHECKING BACK SHOT AT WP#1 LOOKING EAST 30 1015 NEIL CHECKS DERTH OF WP#1 YESING A LASER LEVEL COOKING WEST 31 1130 EXCAUBTING AT THE CAUNDRY SEWER POND LOOKING EAST

Location SWMU 11 CAUNDRY SEISTER 10/20/0345

Project / Client \_\_USACR

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## Appendix C Photo Log

North Wind, Inc. SWMU 11 CMCR



Figure C-1. Dust control at the laundry effluent pond excavation.



Figure C-2. Completed laundry effluent pond excavation.



Figure C-3. Sampling at the laundry effluent pond.



Figure C-4. Close view of compositing procedure for split samples at laundry effluent pond. .



Figure C-5. Contoured laundry effluent pond prior to biomat installation.



Figure C-6. Laundry effluent pond with biomat installed.

18/14/2003

Figure C-7. Start of Waste Pile 3 excavation.



Figure C-8. Dust control at the Waste Pile 3 excavation.



Figure C-9. Loading an end dump truck.



Figure C-10. Preparing to close a roll-off bin filled with Waste Pile 3 soil.



Figure C-11. Completed Waste Pile 3 excavation.



Figure C-12. Surveyors at Waste Pile 3.



Figure C-13. Excavation locations were based on USACE rebar stakes (NW corner Waste Pile 3 shown here).



Figure C-14. Contoured Waste Pile 3.



Figure C-15. Start of Waste Pile 2 excavation and dual hose dust control.



Figure C-16. Partially loaded truck with Waste Pile 2 soil.



Figure C-17. Loading a roll-off bin still on the truck with Waste Pile 2 soil.



Figure C-18. Completed Waste Pile 2 excavation.



Figure C-19. Contoured Waste Pile 2.



Figure C-20. Start of Waste Pile 1 excavation with dust control.



Figure C-21. Checking Waste Pile 1 excavation depth with a laser level.



Figure C-22. Surveyors at Waste Pile 1, looking east.



Figure C-23. Contoured Waste Pile 1.



Figure C-24. Sewage pond excavation in progress.



Figure C-25. Completed sewage pond excavation.



Figure C-26. Completed biomat installation in the sewage pond excavation.

## Appendix D Surveyor's Report

North Wind, Inc. SWMU 11 CMCR

To:	Tom Matzen				
	North Wind, Inc.				ſ
	P.O. Box 51174				
	Idaho Falls, Idaho 83405			•	[J
		Date:	<u> </u>	lovember 4, 2003	L
Proj	ect: USACE Tooele and Deseret Remediation	No.	<u>4</u>	221	
0.1.	Our constant				
Subj	ect: Survey				
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Ву:	1 m 1 / 1 / 1 / 1 / 1 / 1				
1	Mark N Gregory				$\left( \bigcirc^{V} \right)$
F	PLS				

I, Mark N Gregory, do hereby certify that I am a Professional Land Surveyor as prescribed by the laws of the State of Utah, and that I hold Certificate No. 334576. I further certify that on October 22, 2003 a survey done under my supervision was performed for the "SWMU 11 Corrective Measures Implementation at the Tooele Army Depot." This survey was performed using a Topcon GTS-4 total station and the coordinates are NAD 1983 Utah Central Zone datum controlled by points provided in the "Corrective Measures Work Plan for SWMU 25, Former Battery Shop, USACE 2003". I further certify that the results of this survey exceed the requirements for a Third Order Survey.



Full Desc CP HUB	FM REBAR	FM REBAR	TOP 6"CONC PIPE	CL0	TOP	TOE	TOE	TOP	A6 TOP	A6 TOE	A6 TOE	A6 TOP	A6 TOP	A6 TOP	A6 TOE	A6 TOE	A6 CL	TOP	TOE	CL 25	TOE	TOP	TOP	TOE	CL 50	TOE	TOP	TOP	TOE	CL 75	TOE	TOP	TOP	TOE	CL 100
<b>Grid Easting</b> 1392914.534	1392703.521	1392912.055	1392909.637	1392909.947	1392916.239	1392915.726	1392901.311	1392900.496	1392900.468	1392900.601	1392888.526	1392888.227	1392895.029	1392900.035	1392900.088	1392895.697	1392896.921	1392899.765	1392900.406	1392908.41	1392915.23	1392916.171	1392916.582	1392915.517	1392909.19	1392901.354	1392900.433	1392909.198	1392911.094	1392917.711	1392924.921	1392925.648	1392937.81	1392937.088	1392928.352
<b>Grid Northing</b> 7354344.965	7354445.473	7354745.697	7354357.932	7354358.399	7354356.69	7354357.869	7354359.493	7354359	7354361.527	7354362.278	7354369.47	7354368.517	7354382.664	7354380.716	7354380.253	7354382.02	7354372.45	7354382.664	7354383.062	7354383.28	7354383.804	7354383.993	7354406.851	7354406.238	7354407.954	7354409.36	7354409.956	7354434.112	7354433.881	7354431.178	7354428.285	7354427.417	7354450.11	7354450.36	7354453.128
Raw Desc CP HUB	FM REBAR	FM REBAR	TOP 6"CONC PIPE	CL 0	TOP	TOE	TOE	TOP	A6 TOP	A6 TOE	A6 TOE	A6 TOP	A6 TOP	A6 TOP	A6 TOE	A6 TOE	A6 CL	TOP	TOE	CL 25	TOE	TOP	TOP	TOE	CL 50	TOE	TOP	TOP	TOE	CL 75	TOE	TOP	TOP	TOE	CL 100
<b>Easting</b> 9253.0113	9041.997	9250.5316	9248.1141	9248.4243	9254.7158	9254.2027	9239.7874	9238.9731	9238.9446	9239.0779	9227.0026	9226.7039	9233.5055	9238.5115	9238.5644	9234.1734	9235.3981	9238.2423	9238.8833	9246.8868	9253.7071	9254.6482	9255.0594	9253.9937	9247.6668	9239.8304	9238.9098	9247.6745	9249.5707	9256.1876	9263.3975	9264.1246	9276.2872	9275.5655	9266.8288
Northing 6127,5381	6228.047	6528.2725	6140.5058	6140.9729	6139.264	6140.4426	6142.0663	6141.5736	6144.1007	6144.8519	6152.0441	6151.0911	6165.2379	6163.2895	6162.827	6164.5938	6155.0232	6165.2381	6165.6355	6165.8532	6166.3776	6166.567	6189.4245	6188.8122	6190.5274	6191.9337	6192.5293	6216.6855	6216.455	6213.7524	6210.859	6209.991	6232.684	6232.9341	6235.7016
Number 1	9	7	80	6	10	1	12	13	4	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

10E	TOP	TOE	CL 125	TOE	TOP	TOP	TOE	CL 150	TOE	TOP	TOP	TOE	CL 175	TOE	TOP	TOP	TOE	CL 200	TOE	TOP	TOP	TOE	CL 225	TOE	TOP	TOP	TOE	CL 250	TOE	TOP	BLDG1 COR	BLDG1 COR	BLDG1 COR	CP HUB	TOP
1392922.132 1392921.286	1392929.743	1392930.536	1392937.678	1392943.959	1392945.417	1392950.576	1392949.226	1392940.6	1392933.102	1392932.583	1392935.028	1392935.937	1392941.68	1392950.157	1392951.038	1392951.573	1392950.915	1392941.319	1392935.073	1392934.191	1392932.014	1392932.66	1392939.035	1392946.217	1392947.093	1392944.882	1392944.186	1392937.621	1392927.894	1392927.234	1392858.171	1392842.787	1392703.501	1391827.927	1391877.952
7354455.826 7354456.306	7354478.883	7354479.043	7354477.214	7354476.002	7354475.714	7354500.633	7354500.551	7354501.069	7354502.154	7354502.269	7354526.353	7354526.221	7354526.06	7354526.837	7354526.852	7354553.007	7354552.842	7354550.952	7354550.81	7354551.06	7354573.685	7354573.839	7354575.97	7354576.983	7354576.975	7354601.318	7354600.779	7354601.866	7354600.287	7354600.328	7354243.135	7354303.036	7354267.057	7354856.638	7354711.121
TOE	TOP	TOE	CL 125	TOE	TOP	TOP	TOE	CL 150	TOE	TOP	TOP	TOE	CL 175	TOE	TOP	TOP	TOE	CL 200	TOE	TOP	TOP	TOE	CL 225	TOE	TOP	TOP	TOE	CL 250	TOE	TOP	BLDG1 COR	BLDG1 COR	BLDG1 COR	CP HUB	TOP
9260.6094 9259.7626	9268.2199	9269.0129	9276.1546	9282.4357	9283.8936	9289.0534	9287.7025	9279.0773	9271.5794	9271.0596	9273.5049	9274.4144	9280.1567	9288.6336	9289.5146	9290.0504	9289.3923	9279.7956	9273.5501	9272.6682	9270.4907	9271.1366	9277.5115	9284.694	9285.5698	9283.3588	9282.6625	9276.0983	9266.3707	9265.7113	9196.6475	9181.2635	9041.9765	8166.3992	8216.4244
6238.3996 6238.8802	6261.4572	6261.6171	6259.7885	6258.5762	6258.288	6283.207	6283.125	6283.6433	6284.7284	6284.8429	6308.927	6308.7957	6308.6339	6309.4115	6309.4265	6335.5812	6335.4166	6333.5259	6333.3841	6333.634	6356.2594	6356.4133	6358.5448	6359.5579	6359.5491	6383.8928	6383.3537	6384.4407	6382.8613	6382.9026	6025.7081	6085.6096	6049.6306	6639.2137	6493.6959
41	43	44	45	46	47	48	49	20	51	52	53	54	22	26	22	58	29	9	61	62	63	64	65	99	29	89	69	20	71	72	73	74	75	9/	78

TOE 1	<u> </u>	TOP	TOP	TOE A4	TOE	TOP	A5	TOE	TOP	TOP	TOP	TOE A2	A3	TOP	A1	TOP	TOE	TOP	TOE A6	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	T0E	TOP	TOE A3	TOE A4	TOP	TOP	TOE	TOP	TOE A5	A1
1391876.749	13918/3.538	1391874.58	1391850.873	1391850.744	1391831.481	1391829.765	1391833.249	1391837.3	1391837.181	1391832.98	1391858.687	1391858.746	1391876.425	1391877.585	1391854.372	1391809.47	1391808.39	1391794.957	1391795.444	1391774.07	1391773.751	1391759.822	1391761.048	1391759.022	1391758.213	1391758.556	1391759.274	1391779.014	1391778.732	1391794.323	1391794.504	1391807.819	1391807.243	1391809,353	1391808.615	1391795.404
7354710.657	/354682.462	7354680.558	7354683.314	7354684.654	7354688.714	7354687.709	7354702.612	7354716.463	7354717.058	7354702.843	7354716.481	7354715.368	7354695.449	7354695.313	7354700.955	7354798.27	7354799.235	7354797.705	7354799.968	7354803.468	7354801.649	7354806.262	7354807.342	7354824.675	7354824.665	7354846.731	7354845.93	7354845.982	7354844.052	7354840.996	7354843.213	7354839.796	7354839.17	7354818.906	7354818.982	7354819.488
10E	TOE	TOP	TOP	TOE A4	TOE	TOP	A5	TOE	TOP	TOP	TOP	TOE A2	A3	TOP	A1	TOP	TOE	TOP	TOE A6	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	TOE	TOP	TOE A3	TOE A4	TOP	TOP	TOE	TOP	TOE A5	<b>A1</b>
8215.2219	8212.0104	8213.0522	8189.3452	8189.217	8169.9533	8168.2378	8171.7218	8175.7724	8175.6537	8171.4525	8197.16	8197.2183	8214.898	8216.0577	8192.8444	8147.942	8146.8622	8133.4296	8133.9164	8112.5424	8112.2236	8098.2943	8099.5205	8097.4946	8096.6856	8097.0278	8097.7462	8117.4865	8117.2047	8132.7956	8132.976	8146.2916	8145.7153	8147.8251	8147.0873	8133.8763
6493.2318	6465.0373	6463.1332	6465.8884	6467.2287	6471.2888	6470.2841	6485.187	6499.0383	6499.6333	6485.4176	6499.0559	6497.9431	6478.0243	6477.8879	6483.5299	6580.8458	6581.8107	6580.2807	6582.5435	6586.0435	6584.2242	6588.8372	6589.917	6607.25	6607.2403	6629.3061	6628.5059	6628.558	6626.627	6623.5715	6625.7886	6622.372	6621.745	6601.4815	6601.5571	6602.0639
42	80	81	82	83	84	85	86	87	88	89	06	91	92	93	94	95	96	26	86	66	100	101	102	103	104	105	106	107	108	109	110	11	112	113	114	115

A2 TOP	TOE	TOP	TOE A6	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	TOE	TOE A3	TOP	TOP	TOE A4	TOE	TOP	TOP	TOE A5	A1	A2	CP HUB	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	TOE	TOE A3	TOP	<b>A2</b>	TOP	TOE
1391776.582 1391755.841	1391755.272	1391739.78	1391739.7	1391704.361	1391704.553	1391685.636	1391686.515	1391687.169	1391686.513	1391687.887	1391688.493	1391703.622	1391703.573	1391738.826	1391738.653	1391758.953	1391759.82	1391758.652	1391757.952	1391739.392	1391704.735	1391007.391	1391018.56	1391019.14	1391010.184	1391010.08	1390998.722	1390998.309	1390987.906	1390989.244	1390998.577	1390997.93	1391008.643	1390923.078	1390921.687
7354821.899	7354860.294	7354858.124	7354859.386	7354860.086	7354858.963	7354862.191	7354862.921	7354877.682	7354877.716	7354891.511	7354890.388	7354891.681	7354892.269	7354891.817	7354890.229	7354888.752	7354889.361	7354874.012	7354873.972	7354874.988	7354876.567	7354449.928	7354354.635	7354353.857	7354347.149	7354347.878	7354356.731	7354356.348	7354366.506	7354366.904	7354377.08	7354377.919	7354366.29	7354556.001	7354556.156
A2 TOP	10E	TOP	TOE A6	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	TOE	TOE A3	TOP	TOP	TOE A4	TOE	TOP	TOP	TOE A5	A1	A2	CP HUB	TOE A7	TOP	TOP	TOE	TOE A8	TOP	TOP	TOE	TOE A3	TOP	A2	TOP	TOE
8115.0548	8093.744	8078.2526	8078.1726	8042.8334	8043.0248	8024.1085	8024.9876	8025.6409	8024.9855	8026.359	8026.9647	8042.0945	8042.0451	8077.2979	8077.1253	8097.4251	8098.2926	8097.1248	8096.4247	8077.8647	8043.2072	7345.8589	7357.0286	7357.6088	7348.6522	7348.5482	7337.1902	7336.7777	7326.3741	7327.7121	7337.0459	7336.398	7347.1113	7261.5474	7260.1568
6604.4742	6642.8696	6640.6998	6641.9616	6642.6617	6641.539	6644.7664	6645.4965	6660.2572	6660.2914	6674.0865	6672.9637	6674.257	6674.845	6674.3931	6672.8042	6671.3272	6671.9363	6656.5875	6656.5472	6657.5636	6659.1426	6232.5019	6137.2088	6136.4304	6129.722	6130.4519	6139.3045	6138.9212	6149.0799	6149.4776	6159.6537	6160.4925	6148.8639	6338.5758	6338.7301
116	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	149	150	151	152	153	154	155	156	157	158	162	163	164

TOP	TOE A4	TOE A7	TOE	TOE A6	TOP	TOP	TOE A5	TOE	TOP	TOP	TOE A2	TOE	TOE A3	<b>A</b> 1	TOP	TOP	FM WELL N3A	FM CP 83	BLDG1	BLDG1	BLDG1	BLDG1											
1390917 57	1390915.082	1390912.728	1390909.449	1390907.608	1390908.791	1390902.958	1390904.08	1390899.644	1390898.7	1390905.317	1390906.528	1390911.311	1390916.464	1390910.397	1390917.053	1390911.764	1390843.002	1390963.083	1390938.568	1390778.589	1391293.871	1391390.652	1391032.05	1391032.65	1391044.72	1391045.37	1391054.03	1391054.96	1391042.39	1391043.19	1391021.52	1391021.02	1391031.53
7354547 769	7354550.475	7354546.478	7354546.277	7354546.69	7354544.292	7354551.028	7354551.921	7354557.741	7354558.141	7354564.456	7354563.041	7354568.136	7354562.5	7354556.305	7354562.896	7354569.86	7354380.944	7354327.691	7353844.684	7353800.606	7353599.375	7353626.153	7354408.06	7354406.95	7354399.14	7354399.75	7354389.41	7354388.53	7354375.23	7354374.38	7354398.25	7354399.07	7354386.81
TOP	TOE A4	TOE A7	TOE	TOE A6	TOP	TOP	TOE A5	TOE	TOP	TOP	TOE A2	TOE	TOE A3	A1	TOP	TOP	FM WELL N3A	FM CP 83	BLDG1	BLDG1	BLDG1	BLDG1	TOP	TOE	TOE A5	TOP	TOE	TOP	TOE A6	TOP	TOP	TOE A4	A1
7256 0389	7253.5519	7251.197	7247.9183	7246.0774	7247.26	7241.4266	7242.549	7238.1138	7237.1695	7243.7866	7244.9977	7249.7799	7254.933	7248.8668	7255.5226	7250.2332	7181.4697	7301.5508	7277.0345	7117.055	7632.3391	7729.1206	7371.05	7371.65	7383.72	7384.37	7393.03	7393.96	7381.39	7382.19	7360.52	7360.02	7370.53
6330 3437	6333.0489	6329.0519	6328.8512	6329.2641	6326.8666	6333.6024	6334.4956	6340.3156	6340.7157	6347.0303	6345.6151	6350.7103	6345.0743	6338.8798	6345.4705	6352.434	6163.5178	6110.2646	5627.2547	5583.1764	5381.9439	5408.7222	6191.06	6189.95	6182.14	6182.75	6172.41	6171.53	6158.23	6157.38	6181.25	6182.07	6169.81
165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	141	142	143	144	145	146	147	148	160	159	161

# Appendix E Analytical Reports

North Wind, Inc. SWMU 11 CMCR

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

October 29, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11 Work Order: 0310117

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310117-1 and contains 49 pages of information for the 21 samples submitted to MSA on Friday, October 17, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 49. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen Senior Project Manager



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Sample Summary**

Client:North Wind Environmental, Inc.Report Number:0310117-1Project:TEAD SWMU 11Date Reported:10/29/03Project ID:TEAD SWMU 11Work Order:0310117

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310117-01A	S11LP-03-CNF-A1		Soil	10/17/03
0310117-01B	SDG: NWE-0310117			11/10/03
0310117-02A	S11LP-03-CNF-A2		Soil	10/17/03
0310117-03A	S11LP-03-CNF-A3		Soil	10/17/03
0310117-04A	S11LP-03-CNF-A4		Soil	10/17/03
0310117-05A	S11LP-03-CNF-A5		Soil	10/17/03
0310117-06A	S11LP-03-CNF-A6		Soil	10/17/03
0310117-07A	S11LP-03-CNF-A7		Soil	10/17/03
0310117-08A	S11WP2-03-CNF-A1		Soil	10/17/03
0310117-09A	S11WP2-03-CNF-A2		Soil	10/17/03
0310117-10A	S11WP2-03-CNF-A3		Soil	10/17/03
0310117-11A	S11WP2-03-CNF-A4		Soil	10/17/03
0310117-12A	S11WP2-03-CNF-A5		Soil	10/17/03
0310117-13A	S11WP2-03-CNF-A6		Soil	10/17/03
0310117-14A	S11WP2-03-CNF-A7		Soil	10/17/03
0310117-15A	S11WP2-03-CNF-A8		Soil	10/17/03
0310117-16A	S11WP3-03-CNF-A1		Soil	10/17/03
0310117-17A	S11WP3-03-CNF-A2		Soil	10/17/03
0310117-18A	S11WP3-03-CNF-A3		Soil	10/17/03
0310117-19A	S11WP3-03-CNF-A4		Soil	10/17/03
0310117-20A	S11WP3-03-CNF-A5		Soil	10/17/03
0310117-21A	S11WP3-03-CNF-A7		Water	10/17/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

Report Number:

0310117-1

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11 Date Reported: Work Order:

10/29/03 0310117

Sample ID	Client Sample ID						Date Collec	cted
0310117-01A	S11LP-03-CNF-A1	Loo	chate				10/17/03 12	:15
Parameter		Lea Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	нт
Moisture					110p 2 acc		10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/20/03 20:35	40
0310117-02A	S11LP-03-CNF-A2						10/17/03 12	:24
Parameter		Lea Start Date	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture					<b></b>		10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/20/03 22:08	40
0310117-03A	S11LP-03-CNF-A3						10/17/03 12	:24
Davameter		Lea Start Date	chate End Date	НТ	Duon Doto	шт	Analysis Data	НТ
Parameter Moisture		Start Date	End Date	пі	Prep Date	НТ	Analysis Date 10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/20/03 22:39	40
0310117-04A	S11LP-03-CNF-A4						10/17/03 12	:32
Parameter		Lea Start Date	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture		Start Date	End Date	11.1	ттер Басс	111	10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/20/03 23:10	40
0310117-05A	S11LP-03-CNF-A5						10/17/03 12	:35
Parameter		Lea Start Date	chate End Date	нт	Prep Date	НТ	Analysis Date	НТ
Moisture		Start Date	Eliu Date	11.1	ттер Басе	111	10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/20/03 23:41	40
0310117-06A	S11LP-03-CNF-A6						10/17/03 12	:37
Parameter		Lea Start Date	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture		Start Date	Enu Date	111	11ch Date	11.1	10/20/03	270
Semi-Volatiles	(USACE)				10/20/03 09:30	14	10/21/03 00:12	40
	· · · · · ·							

<sup>\* -</sup> The recommended holding time was exceeded

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 

0310117-1

**Project:** TEAD SWMU 11 TEAD SWMU 11

**Project ID:** 

**Date Reported:** Work Order:

10/29/03 0310117

Lead Start Date  Lead Start Date	chate End Date	НТ	Prep Date 10/20/03 09:30	<b>HT</b>	10/17/03 12: <b>Analysis Date</b> 10/20/03	НТ
Start Date		НТ	•			
Leac	Eliu Dacc		•			
Lead			10/20/03 09:30	1.4		270
Lead				14	10/21/03 00:43	40
	• .				10/17/03 13:	:30
	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ
			10/20/03 12:00		10/21/03 11:23	180
					10/20/03	270
	To a constitution of the c				10/17/03 13:	:34
		нт	Pren Date	нт	Analysis Date	НТ
Start Bate	Did Dute		10/20/03 12:00		10/21/03 12:07	180
					10/20/03	270
	•				10/17/03 13:	:35
		нт	Pren Date	НТ	Analysis Date	НТ
			10/20/03 12:00		10/21/03 12:12	180
					10/20/03	270
	_				10/17/03 13:	:36
		нт	Pren Date	нт	Analysis Date	нт
Start Date	End Date		-	***		180
			10/20/03 12.00		10/20/03	270
					10/17/03 13:	:38
		нт	Pren Date	нт	Analysis Date	НТ
Start Date	Enu Date	11.1	-	111	•	180
	Lead Start Date  Lead Start Date  Lead Start Date	Leachate Start Date  Leachate Start Date  Leachate Start Date  Leachate Start Date  Leachate Start Date	Leachate Start Date End Date HT  Leachate Start Date End Date HT  Leachate Start Date End Date HT  Leachate Start Date End Date	Leachate Start Date  Leachate Start Date  End Date  HT Prep Date 10/20/03 12:00  Leachate Start Date  End Date  HT Prep Date 10/20/03 12:00  Leachate Start Date  Leachate Leachate Leachate	Leachate Start Date End Date HT Prep Date 10/20/03 12:00  HT  Leachate Start Date End Date HT Prep Date 10/20/03 12:00  HT  Leachate Start Date End Date HT Prep Date 10/20/03 12:00  HT	Leachate   HT   Prep Date   HT   Analysis Date   10/20/03 12:00   HT   Analysis Date   10/20/03 12:00   10/20/03 12:07   10/20/03

<sup>\* -</sup> The recommended holding time was exceeded

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client:North Wind Environmental, Inc.Report Number:0310117-1Project:TEAD SWMU 11Date Reported:10/29/03

Project ID: TEAD SWMU 11 Work Order: 0310117

Sample ID	Client Sample ID						Date Colle	cted
Moisture							10/20/03	270
0310117-13A	S11WP2-03-CNF-A6						10/17/03 13	:39
Parameter		Lea Start Date	chate End Date	нт	Prep Date	НТ	Analysis Date	НТ
Metals by hrICP	P (USACE)	Start Date	End Date		10/20/03 12:00	111	10/21/03 12:25	180
Moisture	(CONTEL)				10,20,03 12.00		10/20/03	270
0310117-14A	S11WP2-03-CNF-A7	Lea	chate				10/17/03 13	:40
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Metals by hrICP	P (USACE)				10/20/03 12:00		10/21/03 12:29	180
Moisture							10/20/03	270
0310117-15A	S11WP2-03-CNF-A8	Loo	chate				10/17/03 13	:41
Parameter		Start Date	End Date	нт	Prep Date	НТ	Analysis Date	нт
Metals by hrICP	P (USACE)				10/20/03 12:00		10/21/03 12:33	180
Moisture							10/20/03	270
0310117-16A	S11WP3-03-CNF-A1	T	1.4				10/17/03 13	:04
Parameter		Lea Start Date	chate End Date	нт	Prep Date	нт	Analysis Date	нт
Metals by hrICP	P (USACE)	~			10/20/03 12:00		10/21/03 12:38	180
Moisture							10/20/03	270
0310117-17A	S11WP3-03-CNF-A2	_					10/17/03 13	:01
Parameter		Lea Start Date	chate End Date	нт	Prep Date	НТ	Analysis Date	НТ
Metals by hrICP	P (LISACE)	Start Date	Eng Date	111	10/20/03 12:00	111	10/21/03 12:51	180
Moisture					10/20/03 12.00		10/21/03 12.31	270
0310117-18A	S11WP3-03-CNF-A3						10/17/03 13	
Parameter		Lea Start Date	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ

<sup>\* -</sup> The recommended holding time was exceeded

# Mountain States Analytical, LLC

### **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

**Report Number:** 0310117-1 **Client:** North Wind Environmental, Inc. **Date Reported:** 10/29/03 **Project:** TEAD SWMU 11 0310117

Work Order: TEAD SWMU 11 **Project ID:** 

Sample ID	Client Sample ID						Date Collec	eted
Metals by hrICF	O (USACE)				10/20/03 12:00		10/21/03 12:55	180
Moisture							10/20/03	270
0310117-19A	S11WP3-03-CNF-A4	Lea	chate				10/17/03 13	:06
Parameter		Start Date	End Date	НТ	Prep Date	HT	Analysis Date	HT
Metals by hrICF	P (USACE)				10/20/03 12:00		10/21/03 12:59	180
Moisture							10/20/03	270
0310117-20A	S11WP3-03-CNF-A5	Lan	chate				10/17/03 13:08	
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Metals by hrICF	P (USACE)				10/20/03 12:00		10/21/03 13:04	180
Moisture							10/20/03	270
0310117-21A	S11WP3-03-CNF-A7	Laa	ahata				10/17/03 23	:40
Parameter		Start Date	chate End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Metals by hrICF	P (USACE)	Zuii Duii	Dia Ducc		10/20/03 11:30	***	10/28/03 17:26	180

# Mountain States Analytical, LLC

Analytical Report

0310117-1

S11LP-03-CNF-A1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-01A

**Date Collected:** 10/17/03

**Report Number:** 

**Client Sample ID:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.81	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (USA	.CE), Solid						
Benz(a)anthracene	U	42	347	μg/Kg	1	10/20/03 20:35	KPF
Benzo(b)fluoranthene	U	84	347	μg/Kg	1	10/20/03 20:35	KPF
bis(2-Ethylhexyl)phthalate	116 J	63	347	μg/Kg	1	10/20/03 20:35	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	122	45	5-135	% Recovery	1	10/20/03 20:35	KPF
2-Fluorophenol	69.9	45	5-135	% Recovery	1	10/20/03 20:35	KPF
2-Fluorobiphenyl	72.5	45	5-135	% Recovery	1	10/20/03 20:35	KPF
Nitrobenzene-d5	71.9	45	5-135	% Recovery	1	10/20/03 20:35	KPF
Phenol-d6	69.6	45	5-135	% Recovery	1	10/20/03 20:35	KPF
Terphenyl-d14	81.7	45	5-135	% Recovery	1	10/20/03 20:35	KPF

Note for 10/20/03 20:35 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

Note for 10/20/03 09:30 analysis: Fine particulate fell out of sample on N-evap.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

S11LP-03-CNF-A2

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-02A

**Date Collected:** 10/17/03

**Report Number:** 

**Client Sample ID:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	12.2	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (US	ACE), Solid						
Benz(a)anthracene	U	45.6	376	μg/Kg	1	10/20/03 22:08	KPF
Benzo(b)fluoranthene	U	91.1	376	μg/Kg	1	10/20/03 22:08	KPF
bis(2-Ethylhexyl)phthalate	472	68.3	376	μg/Kg	1	10/20/03 22:08	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	124	45	5-135	% Recovery	1	10/20/03 22:08	KPF
2-Fluorophenol	88.1	45	5-135	% Recovery	1	10/20/03 22:08	KPF
2-Fluorobiphenyl	90.6	45	5-135	% Recovery	1	10/20/03 22:08	KPF
Nitrobenzene-d5	93.3	45	5-135	% Recovery	1	10/20/03 22:08	KPF
Phenol-d6	86.5	45	5-135	% Recovery	1	10/20/03 22:08	KPF
Terphenyl-d14	94.9	45	5-135	% Recovery	1	10/20/03 22:08	KPF

Note for 10/20/03 22:08 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 JMR

Note for 10/20/03 09:30 analysis: Extract was dark and thick.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

S11LP-03-CNF-A3

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-03A

Date Collected: 10/17/03

**Client Sample ID:** 

**Report Number:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.55	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (US	SACE), Solid						
Benz(a)anthracene	U	41.9	346	μg/Kg	1	10/20/03 22:39	KPF
Benzo(b)fluoranthene	U	83.8	346	μg/Kg	1	10/20/03 22:39	KPF
bis(2-Ethylhexyl)phthalate	136 J	62.9	346	μg/Kg	1	10/20/03 22:39	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	119	45	5-135	% Recovery	1	10/20/03 22:39	KPF
2-Fluorophenol	78.0	45	5-135	% Recovery	1	10/20/03 22:39	KPF
2-Fluorobiphenyl	79.5	45	5-135	% Recovery	1	10/20/03 22:39	KPF
Nitrobenzene-d5	80.3	45	5-135	% Recovery	1	10/20/03 22:39	KPF
Phenol-d6	74.9	45	5-135	% Recovery	1	10/20/03 22:39	KPF
Terphenyl-d14	99.1	45	5-135	% Recovery	1	10/20/03 22:39	KPF

Note for 10/20/03 22:39 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

# 

**Analytical Report** 

0310117-1

S11LP-03-CNF-A4

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-04A

(208) 528-8718

**Date Collected:** 10/17/03

**Report Number:** 

**Client Sample ID:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	11.5	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (US	SACE), Solid						
Benz(a)anthracene	U	45.2	373	μg/Kg	1	10/20/03 23:10	KPF
Benzo(b)fluoranthene	U	90.4	373	μg/Kg	1	10/20/03 23:10	KPF
bis(2-Ethylhexyl)phthalate	585	67.8	373	μg/Kg	1	10/20/03 23:10	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	121	45	5-135	% Recovery	1	10/20/03 23:10	KPF
2-Fluorophenol	87.1	45	5-135	% Recovery	1	10/20/03 23:10	KPF
2-Fluorobiphenyl	92.3	45	5-135	% Recovery	1	10/20/03 23:10	KPF
Nitrobenzene-d5	95.3	45	5-135	% Recovery	1	10/20/03 23:10	KPF
Phenol-d6	84.6	45	5-135	% Recovery	1	10/20/03 23:10	KPF
Terphenyl-d14	96.9	45	5-135	% Recovery	1	10/20/03 23:10	KPF

Note for 10/20/03 23:10 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

Note for 10/20/03 09:30 analysis: Extract was dark and thick.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-05A

Client Sample ID: S11LP-03-CNF-A5

Date Collected: 10/17/03

**Report Number:** 

Project: TEAD SWMU 11 Date Received: 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	11.0	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (USA	ACE), Solid						
Benz(a)anthracene	U	44.9	371	μg/Kg	1	10/20/03 23:41	KPF
Benzo(b)fluoranthene	U	89.9	371	μg/Kg	1	10/20/03 23:41	KPF
bis(2-Ethylhexyl)phthalate	124 J	67.4	371	μg/Kg	1	10/20/03 23:41	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	116	45	5-135	% Recovery	1	10/20/03 23:41	KPF
2-Fluorophenol	76.2	45	5-135	% Recovery	1	10/20/03 23:41	KPF
2-Fluorobiphenyl	75.5	45	5-135	% Recovery	1	10/20/03 23:41	KPF
Nitrobenzene-d5	79.5	45	5-135	% Recovery	1	10/20/03 23:41	KPF
Phenol-d6	73.3	45	5-135	% Recovery	1	10/20/03 23:41	KPF
Terphenyl-d14	98.7	45	5-135	% Recovery	1	10/20/03 23:41	KPF

Note for 10/20/03 23:41 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

# Mountain States Analytical, LLC

**Analytical Report** 

0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-06A

Client Sample ID: S11LP-03-CNF-A6

Date Collected: 10/17/03

**Report Number:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	12.0	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (US	SACE), Solid						
Benz(a)anthracene	U	45.5	375	μg/Kg	1	10/21/03 00:12	KPF
Benzo(b)fluoranthene	U	90.9	375	μg/Kg	1	10/21/03 00:12	KPF
bis(2-Ethylhexyl)phthalate	U	68.2	375	$\mu g/Kg$	1	10/21/03 00:12	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	122	45	5-135	% Recovery	1	10/21/03 00:12	KPF
2-Fluorophenol	79.1	45	5-135	% Recovery	1	10/21/03 00:12	KPF
2-Fluorobiphenyl	81.4	45	5-135	% Recovery	1	10/21/03 00:12	KPF
Nitrobenzene-d5	84.5	45	5-135	% Recovery	1	10/21/03 00:12	KPF
Phenol-d6	76.6	45	5-135	% Recovery	1	10/21/03 00:12	KPF
Terphenyl-d14	97.7	45	5-135	% Recovery	1	10/21/03 00:12	KPF

Note for 10/21/03 00:12 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 10/20/03 09:30 JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

## Mountain States Analytical, LLC

**Analytical Report** 

0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-07A

Client Sample ID: S11LP-03-CNF-A7

Date Collected: 10/17/03

**Report Number:** 

Project: TEAD SWMU 11 Date Received: 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	6.70	0.01	0.01	%	1	10/20/03	RH
SW-846 8270C: Semi-Volatiles (US	ACE), Solid						
Benz(a)anthracene	U	214	1770	μg/Kg	1	10/21/03 00:43	KPF
Benzo(b)fluoranthene	U	429	1770	μg/Kg	1	10/21/03 00:43	KPF
bis(2-Ethylhexyl)phthalate	2530	322	1770	μg/Kg	1	10/21/03 00:43	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	119	45	5-135	% Recovery	1	10/21/03 00:43	KPF
2-Fluorophenol	102	45	5-135	% Recovery	1	10/21/03 00:43	KPF
2-Fluorobiphenyl	101	45	5-135	% Recovery	1	10/21/03 00:43	KPF
Nitrobenzene-d5	101	45	5-135	% Recovery	1	10/21/03 00:43	KPF
Phenol-d6	103	45	5-135	% Recovery	1	10/21/03 00:43	KPF
Terphenyl-d14	115	45	5-135	% Recovery	1	10/21/03 00:43	KPF

Note for 10/21/03 00:43 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

Prep Batch ID: 12380 5 10/20/03 09:30 JMR

Note for 10/20/03 09:30 analysis: Due to the matrix, the extract would not concentrate to the expected final volume. Extract was dark and thick.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-08A

**Client Sample ID:** (208) 528-8718

S11WP2-03-CNF-A1 **Date Collected:** 10/17/03

10/17/03 16:00 **Project: Date Received:** TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.74	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, S	Solid						
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (US	SACE), Solid						
Arsenic	4.20 J	1.57	7.92	mg/Kg	1	10/21/03 11:23	JMR
Lead	2.41 J	1.57	7.92	mg/Kg	1	10/21/03 11:23	JMR

Note for 10/21/03 11:23 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

Thomas Matzen Report Number: 0310117-1
North Wind Environmental, Inc. Date Reported: 10/29/03
545 Shoup Avenue Work Order: 0310117
Idaho Falls, ID 83402 Lab Sample ID: 0310117-09A

(208) 528-8718

Client Sample ID: S11WP2-03-CNF-A2

Date Collected: 10/17/03

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.69	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep,	Solid						
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (U	SACE), Solid						
Arsenic	6.40 J	1.57	8.11	mg/Kg	1	10/21/03 12:07	JMR
Lead	28.0	1.57	8.11	mg/Kg	1	10/21/03 12:07	JMR

Note for 10/21/03 12:07 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

S11WP2-03-CNF-A3

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-10A

**Client Sample ID:** (208) 528-8718

> **Date Collected:** 10/17/03

10/17/03 16:00 **Project: Date Received:** TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	6.56	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep,	Solid						
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (U	SACE), Solid						
Arsenic	3.42 J	1.61	8.11	mg/Kg	1	10/21/03 12:12	JMR
Lead	2.57 J	1.61	8.11	mg/Kg	1	10/21/03 12:12	JMR

Note for 10/21/03 12:12 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

S11WP2-03-CNF-A4

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-11A

**Client Sample ID:** (208) 528-8718

> **Date Collected:** 10/17/03

10/17/03 16:00 **Project: Date Received:** TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.95	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, So	olid						
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USA	ACE), Solid						
Arsenic	5.53 J	1.7	8.3	mg/Kg	1	10/21/03 12:16	JMR
Lead	7.12 J	1.7	8.3	mg/Kg	1	10/21/03 12:16	JMR

Note for 10/21/03 12:16 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



Soil

S11WP2-03-CNF-A5

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

**Project ID:** 

Thomas Matzen Report Number: 0310117-1
North Wind Environmental, Inc. Date Reported: 10/29/03
545 Shoup Avenue Work Order: 0310117
Idaho Falls, ID 83402 Lab Sample ID: 0310117-12A

(208) 528-8718

**TEAD SWMU 11** 

**Date Collected:** 10/17/03

**Client Sample ID:** 

Matrix:

Project: TEAD SWMU 11 Date Received: 10/17/03 16:00

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.53	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, S	olid						
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (US	ACE), Solid						
Arsenic	3.96 J	1.52	7.85	mg/Kg	1	10/21/03 12:20	JMR
Lead	2.74 J	1.52	7.85	mg/Kg	1	10/21/03 12:20	JMR

Note for 10/21/03 12:20 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-13A

**Client Sample ID:** (208) 528-8718

S11WP2-03-CNF-A6 **Date Collected:** 10/17/03

**Project: Date Received:** 10/17/03 16:00 TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.49	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, So	lid						
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USA	ACE), Solid						
Arsenic	6.77 J	1.59	7.86	mg/Kg	1	10/21/03 12:25	JMR
Lead	10.3	1.59	7.86	mg/Kg	1	10/21/03 12:25	JMR

Note for 10/21/03 12:25 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



S11WP2-03-CNF-A7

10/17/03 16:00

**Client Sample ID:** 

**Date Received:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: 0310117-1 North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-14A

(208) 528-8718

**Date Collected:** 10/17/03

**Project:** TEAD SWMU 11 **Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.28	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, So	lid						
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USA	CE), Solid						
Arsenic	3.24 J	1.57	7.92	mg/Kg	1	10/21/03 12:29	JMR
Lead	2.30 J	1.57	7.92	mg/Kg	1	10/21/03 12:29	JMR

Note for 10/21/03 12:29 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

**Purchase Order:** 

Thomas Matzen Report Number: 0310117-1
North Wind Environmental, Inc. Date Reported: 10/29/03
545 Shoup Avenue Work Order: 0310117
Idaho Falls, ID 83402 Lab Sample ID: 0310117-15A

(208) 528-8718

Client Sample ID: S11WP2-03-CNF-A8

**Date Collected:** 10/17/03

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.88	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, Solid	d						
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USAC	CE), Solid						
Arsenic	4.48 J	1.53	7.84	mg/Kg	1	10/21/03 12:33	JMR
Lead	2.24 J	1.53	7.84	mg/Kg	1	10/21/03 12:33	JMR

Note for 10/21/03 12:33 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

S11WP3-03-CNF-A1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-16A

**Client Sample ID:** (208) 528-8718

> **Date Collected:** 10/17/03

**Project: Date Received:** 10/17/03 16:00 TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	3.22	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep,	Solid						
Prep Batch ID: 12381					52	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (U	SACE), Solid						
Arsenic	5.89 J	1.55	7.99	mg/Kg	1	10/21/03 12:38	JMR
Lead	3.31 J	1.55	7.99	mg/Kg	1	10/21/03 12:38	JMR

Note for 10/21/03 12:38 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

**Date Received:** 

S11WP3-03-CNF-A2

10/17/03 16:00

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

TEAD SWMU 11

**Client:** Thomas Matzen

**Project:** 

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-17A

**Client Sample ID:** (208) 528-8718

**Date Collected:** 10/17/03

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	2.60	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep,	Solid						
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (U	SACE), Solid						
Arsenic	4.62 J	1.54	7.81	mg/Kg	1	10/21/03 12:51	JMR
Lead	3.18 J	1.54	7.81	mg/Kg	1	10/21/03 12:51	JMR

Note for 10/21/03 12:51 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

**Purchase Order:** 

Report Number: North Wind Environmental, Inc. **Date Reported:** 10/29/03 545 Shoup Avenue Work Order: 0310117 Idaho Falls, ID 83402 Lab Sample ID: 0310117-18A

(208) 528-8718

**Client Sample ID:** S11WP3-03-CNF-A3

**Date Collected:** 10/17/03

**Project: Date Received:** 10/17/03 16:00 TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.77	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, S	Solid						
Prep Batch ID: 12381					50	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (US	SACE), Solid						
Arsenic	3.26 J	1.53	7.68	mg/Kg	1	10/21/03 12:55	JMR
Lead	3.97 J	1.53	7.68	mg/Kg	1	10/21/03 12:55	JMR

Note for 10/21/03 12:55 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



10/17/03

**Date Collected:** 

S11WP3-03-CNF-A4

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

Thomas Matzen Report Number: 0310117-1
North Wind Environmental, Inc. Date Reported: 10/29/03
545 Shoup Avenue Work Order: 0310117
Idaho Falls, ID 83402 Lab Sample ID: 0310117-19A

(208) 528-8718 Client Sample ID:

Project: TEAD SWMU 11 Date Received: 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.20	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, S	Solid						
Prep Batch ID: 12381					49	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (US	SACE), Solid						
Arsenic	4.45 J	1.52	7.48	mg/Kg	1	10/21/03 12:59	JMR
Lead	2.53 J	1.52	7.48	mg/Kg	1	10/21/03 12:59	JMR

Note for 10/21/03 12:59 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



S11WP3-03-CNF-A5

**Client Sample ID:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

Thomas Matzen Report Number: 0310117-1
North Wind Environmental, Inc. Date Reported: 10/29/03
545 Shoup Avenue Work Order: 0310117
Idaho Falls, ID 83402 Lab Sample ID: 0310117-20A

(208) 528-8718

 Project:
 TEAD SWMU 11
 Date Received:
 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	3.51	0.01	0.01	%	1	10/20/03	RH
SW-846 3050B: Flame/hrICP Prep, So	olid						
Prep Batch ID: 12381					51	10/20/03 12:00	BBO
SW-846 6010B: Metals by hrICP (USA	ACE), Solid						
Arsenic	5.18 J	1.55	7.89	mg/Kg	1	10/21/03 13:04	JMR
Lead	3.11 J	1.55	7.89	mg/Kg	1	10/21/03 13:04	JMR

Note for 10/21/03 13:04 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0310117-1

North Wind Environmental, Inc.

Date Reported: 10/29/03

545 Shoup Avenue

Work Order: 0310117

Idaho Falls, ID 83402

Lab Sample ID: 0310117-21A

(208) 528-8718 Client Sample ID: S11WP3-03-CNF-A7

**Date Collected:** 10/17/03

**Project:** TEAD SWMU 11 **Date Received:** 10/17/03 16:00

Project ID: TEAD SWMU 11 Matrix: Water

Purchase Order: COC ID:

Parameter		Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
	Flame/hrICP Prep, V	Water					10/20/02 11 20	DD O
Prep Batch ID: SW-846 6010R:	Metals by hrICP (US	SACE). Water					10/20/03 11:30	BBO
Arsenic	11100mis	U	0.03	0.15	mg/L	1	10/28/03 17:26	JMR
Lead		U	0.03	0.15	mg/L	1	10/28/03 17:26	JMR

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310117-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc. Report Number:

Project: TEAD SWMU 11

Project ID: TEAD SWMU 11

Work Order: 0310117

ASTM D2216-92: Moisture, Solid

**QC Type:** Sample Duplicate

 Sample ID:
 0310108-07A DUP
 Analysis Date:
 10/20/03
 Units:
 %

 Run ID:
 WC\_031020J
 Prep Batch ID:
 R39517
 Seq No:
 491351

True Percent RPD Spike Low High **Duplicate** Result **Parent** Value Recovery Limit **Parent RPD** Limit Parameter Limit Percent Moisture 18.2 18.6 2.2 20

**QC Type:** Sample Duplicate

 Sample ID:
 0310117-01A DUP
 Analysis Date:
 10/20/03
 Units:
 %

 Run ID:
 WC\_031020J
 Prep Batch ID:
 R39517
 Seq No:
 491353

Spike True Percent Low High **Duplicate RPD** Parameter Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit Percent Moisture 4.52 4.81 6.2 20

QC Type: Sample Duplicate

Sample ID: 0310117-08A DUP

 Sample ID:
 0310117-08A DUP
 Analysis Date:
 10/20/03
 Units:
 %

 Run ID:
 WC\_031020J
 Prep Batch ID:
 R39517
 Seq No:
 491361

Spike True Percent High **Duplicate RPD** Parameter Result **Parent** Value Recovery Limit **Parent RPD** Limit Limit Percent Moisture 4.60 4.74 3.0 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

**Report Number:** 

0310117-1

**Project:** TEAD SWMU 11

**Date Reported:** 

10/29/03

Work Order:

0310117

QC Type: Sample Duplicate

**Sample ID:** 0310117-18A DUP **Run ID:** WC 031020J

Project ID:

**Analysis Date:** 10/20/03 **Prep Batch ID:** R39517

0/03 **Units:** % **Seq No:** 491372

Spike True Percent Low High Duplicate RPD
Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Percent Moisture 1.65 1.77 7.0 20

QC Type: Sample Duplicate

 Sample ID:
 0310117-20A DUP
 Analysis Date:
 10/20/03
 Units:
 %

 Run ID:
 WC\_031020J
 Prep Batch ID:
 R39517
 Seq No:
 491375

True Percent RPD High **Duplicate** Spike Low Result Parent **RPD** Limit **Parameter** Value Recovery Limit Limit Parent Percent Moisture 3.46 3.51 1.4 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

North Wind Environmental, Inc. **Client:** 

**Report Number:** 

0310117-1 10/29/03

Project: TEAD SWMU 11 Project ID: TEAD SWMU 11 **Date Reported:** Work Order:

0310117

SW-846 6010B: Metals by hrICP (USACE), Solid

Method Blank QC Type:

Sample ID: PBW-12381 Run ID: TJA-IRIS\_031021B **Analysis Date:** 10/21/03 11:15

Prep Batch ID: 12381 Units: mg/Kg

Seq No: 491450

Parameter	Result	Spike Parent	True Per Value Rec			High Limit	Duplicate Parent	RPD RPD Limit
Arsenic Lead	0.0096 -0.0028	0 0	0	0 0	-0.06 -0.06	0.03 0.03		

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-12381

Run ID:

**Analysis Date:** 10/21/03 11:19 TJA-IRIS 031021B

**Prep Batch ID:** 12381 Units: mg/Kg

Seq No: 491451

Parameter	Result	Spike Parent				U	Duplicate Parent	RPD RPD Limit
Arsenic Lead	96.8 90.2		100 100	96.8 90.2	80 80	120 120		

QC Type: Sample Duplicate

Sample ID: 0310117-08A D 10/21/03 11:26 **Analysis Date:** mg/Kg Units: Run ID: TJA-IRIS\_031021B Seq No: 491453 Prep Batch ID: 12381

Parameter	Result	Spike Parent	True Percent Value Recovery	U		RF RPD Li	
Arsenic Lead	3.9 J 2.2 J				4.0 J 2.3 J	2.6 6.2	35 35

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

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#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

Report Number:

0310117-1

**Project:** TEAD SWMU 11

**Date Reported:** 

10/29/03

Work Order:

0310117

QC Type: Matrix Spike

**Sample ID:** 0310117-08A MS **Run ID:** TJA-IRIS 031021B

Project ID:

**Analysis Date:** 10/21/03 11:30 **Prep Batch ID:** 12381

Units: mg/Kg Seq No: 491454

Spike True Percent Low High Duplicate RPD
Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Arsenic 54.5 4.0 J 51.0 98.9 75 125 Lead 47.2 2.3 J 51.0 88.0 75 125

QC Type: Matrix Spike Duplicate Sample ID: 0310117-08A MSD

 Sample ID:
 0310117-08A MSD
 Analysis Date:
 10/21/03 11:33

 Run ID:
 TJA-IRIS 031021B
 Prep Batch ID:
 12381

Units: mg/Kg

TJA-IRIS\_031021B Prep Batch ID: 12381 Seq No: 491455

Spike True Percent Low High Duplicate

**Duplicate** RPD Spike Low High Result **Parent Parent** Parameter Value Recovery Limit Limit **RPD** Limit Arsenic 45.5 4.0 J50.0 82.9 75 125 54.5 18 35 Lead 40.2 2.3 J 50.0 75.7 75 125 47.2 16 35

QC Type: Post Digestion/Distillation Spike

 Sample ID:
 0310117-08A A
 Analysis Date:
 10/21/03 11:38
 Units:
 mg/Kg

 Run ID:
 TJA-IRIS\_031021B
 Prep Batch ID:
 12381
 Seq No:
 491456

True Percent RPD Spike **Duplicate** Low High Result **Parent** Parameter Value Recovery Limit Limit **Parent RPD** Limit Arsenic 55.8 4.0 J 50.3 103 75 125 Lead 47.9 2.3 J 50.3 90.7 75 125

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Report Number:

0310117-1

**Project:** TEAD SWMU 11

Date Reported:

10/29/03

Project ID: TEAD SWMU 11

Work Order:

0310117

**QC Type:** Serial Dilution

**Sample ID:** 0310117-08A L **Run ID:** TJA-IRIS 031021B

Analysis Date: Prep Batch ID:

10/21/03 11:43

Units: mg/Kg

12381

**Seq No:** 491457

Parameter	Result	Spike Parent	True Percent Value Recovery	0		%D %D Limit
Arsenic	U				4.0 J	NC

Lead U

4.0 J NC 10 2.3 J NC 10

QC Type: Method Blank Sample ID: PBW-12381

**Analysis Date:** 10/20/03 17:38

Units: mg/Kg

**Run ID:** TJA-IRIS\_031020C

Prep Batch ID: 12381

**Seq No:** 491512

Parameter	Result	Spike Parent	True Perc Value Reco		Low Limit	0	Duplicate Parent	RPD RPD Limit
Arsenic Lead	-0.0048 0.012	0 0	0 0	-	-0.06 -0.06	0.03 0.03		

**QC Type:** Laboratory Control Sample (Water)

Sample ID: LCSW-12381 Run ID: TJA-IRIS\_031020C **Analysis Date:** 10/20/03 17:42

Prep Batch ID: 12381

**Units:** mg/Kg **Seq No:** 491513

Spike True Percent Low High Duplicate RPD
Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Arsenic 95.4 100 95.4 75 125 Lead 93.8 100 93.8 75 125

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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#### **Quality Control Summary**

North Wind Environmental, Inc. **Client:** 

**Report Number:** 

0310117-1

Project: TEAD SWMU 11 **Date Reported:** 

10/29/03

TEAD SWMU 11

Work Order:

0310117

Sample Duplicate QC Type:

Sample ID: 0310117-08A D **Analysis Date:** 

10/20/03 17:50

Units: mg/Kg

Run ID:

Project ID:

TJA-IRIS 031020C

Prep Batch ID:

12381

Seq No: 491515

Parameter	Result	Spike Parent	True Percent Value Recovery	0	Duplicate Parent	RP RPD Lin	
Arsenic Lead	2.1 JR(3a) 2.6 JR(3a)				3.6 J 1.9 J	54 31	20 20

3a: Duplicates not evaluated - matrix sample <10x the detection limit

QC Type: Matrix Spike

Sample ID: 0310117-08A MS Run ID: TJA-IRIS\_031020C **Analysis Date:** Prep Batch ID: 12381

10/20/03 17:54

Units: mg/Kg Seq No: 491516

Parameter	Result	Spike Parent				0	Duplicate Parent	RPD RPD Limit
Arsenic Lead	53.5 48.3	3.6 J 1.9 J	51.0 51.0	97.7 90.9	75 75	125 125		
Lead	48.3	1.9 J	51.0	90.9	75	125		

QC Type: Matrix Spike Duplicate

Sample ID: 0310117-08A MSD Run ID: TJA-IRIS 031020C **Analysis Date:** Prep Batch ID: 12381

10/20/03 17:57

Units: mg/Kg

Seq No: 491517

True Percent **Duplicate** RPD Spike Low High Result **RPD** Limit Parameter **Parent** Value Recovery Limit Limit **Parent** Arsenic 44.7 3.6 J50.0 82.0 75 125 53.5 18 20 Lead 40.8 1.9 J 50.0 77.7 75 125 48.3 17

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

20



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#### **Quality Control Summary**

North Wind Environmental, Inc. **Client:** 

TEAD SWMU 11

**Report Number:** 

0310117-1

Project: TEAD SWMU 11 **Date Reported:** 

10/29/03

Work Order:

0310117

Post Digestion/Distillation Spike QC Type:

Sample ID: Run ID:

Project ID:

0310117-08A A **Analysis Date:**  10/20/03 18:02

Units: mg/Kg

TJA-IRIS 031020C

Prep Batch ID:

12381

Seq No: 491518

Spike True Percent Low High **Duplicate** RPD **Parameter** Result **Parent** Value Recovery Limit Limit Parent **RPD** Limit 53.9 100 Arsenic 3.6 J50.3 75 125 Lead 48.6 1.9 J 50.3 92.8 75 125

QC Type: Serial Dilution

Sample ID: 0310117-08A L Run ID: TJA-IRIS 031020C

10/20/03 18:07 **Analysis Date:** 

**Prep Batch ID:** 

12381

Units: mg/Kg

Seq No: 491519

Parameter	Result	Spike Parent	True Percent Value Recovery	Low Limit	0	Duplicate Parent	%D Li	
Arsenic Lead	U U					3.6 J 1.9 J	NC NC	10 10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

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#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc.

**Report Number:** 0310117-1 10/29/03 **Date Reported:** TEAD SWMU 11 Work Order: 0310117 TEAD SWMU 11

QC Type: Method Blank

**Project:** 

Project ID:

Sample ID: PBW-12379 **Analysis Date:** 10/21/03 15:43 Units: mg/L TJA-IRIS 031021A Seq No: 491656 Run ID: Prep Batch ID: 12379

Parameter	Result	Spike Parent	True I Value R	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Antimony	0.0081	0	0	0	-0.06	0.03		
Arsenic	0.0094	0	0	0	-0.06	0.03		
Barium	0.00027	0	0	0	-0.006	0.003		
Cadmium	0.00038	0	0	0	-0.006	0.003		
Chromium	0.00010	0	0	0	-0.02	0.01		
Lead	0.0097	0	0	0	-0.06	0.03		
Selenium	-0.020	0	0	0	-0.1	0.05		
Silver	0.00047	0	0	0	-0.006	0.003		
Thallium	-0.0025	0	0	0	-0.1	0.05		

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-12379 **Analysis Date:** 10/21/03 15:47 Units: mg/L Run ID: TJA-IRIS 031021A Prep Batch ID: 12379 Seq No: 491657

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Antimony	1.01		1.00	101	75	125		
Arsenic	1.01		1.00	101	75	125		
Barium	0.202		0.200	101	75	125		
Cadmium	0.0978		0.100	97.8	75	125		
Chromium	0.397		0.400	99.3	75	125		
Lead	0.974		1.00	97.4	75	125		
Selenium	0.999		1.00	99.9	75	125		
Silver	0.104		0.100	104	75	125		
Thallium	0.963		1.00	96.3	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

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#### **Quality Control Summary**

Client:North Wind Environmental, Inc.Report Number:0310117-1Project:TEAD SWMU 11Date Reported:10/29/03Project ID:TEAD SWMU 11Work Order:0310117

**QC Type:** Sample Duplicate

 Sample ID:
 0310083-01F D
 Analysis Date:
 10/21/03 15:55
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_031021A
 Prep Batch ID:
 12379
 Seq No:
 491659

Result	Spike Parent	True Percent Value Recovery	Low Limit	High Limit	Duplicate Parent		
0.035 J					U	NC	20
0.038J					0.035 J	6.6	20
0.0242					0.0246	1.6	20
$0.013\mathrm{J}$					0.013 J	2.3	20
0.0669					0.0638	4.8	20
$0.094  \mathrm{J}$					0.095 J	1.6	20
U					U	NC	20
0.0938					0.0983	4.8	20
U					U	NC	20
	0.035 J 0.038 J 0.0242 0.013 J 0.0669 0.094 J U 0.0938	Result Parent  0.035 J 0.038 J 0.0242 0.013 J 0.0669 0.094 J U 0.0938	Result Parent Value Recovery  0.035 J 0.038 J 0.0242 0.013 J 0.0669 0.094 J U 0.0938	Result Parent Value Recovery Limit  0.035 J 0.038 J 0.0242 0.013 J 0.0669 0.094 J U 0.0938	Result Parent Value Recovery Limit Limit  0.035 J 0.038 J 0.0242 0.013 J 0.0669 0.094 J U 0.0938	Result         Parent         Value Recovery         Limit         Limit         Parent           0.035 J         U         0.035 J         0.035 J         0.0246           0.013 J         0.013 J         0.013 J         0.0638           0.094 J         U         U         U           0.0938         0.09938         0.0983	Result         Parent         Value Recovery         Limit         Limit         Parent         RPD Lin           0.035 J         U         NC           0.038 J         0.035 J         6.6           0.0242         0.0246         1.6           0.013 J         2.3           0.0669         0.0638         4.8           0.094 J         0.095 J         1.6           U         NC           0.0938         4.8

QC Type: Matrix Spike

 Sample ID:
 0310083-01F MS
 Analysis Date:
 10/21/03 15:59
 Units:
 mg/L

 Run ID:
 TJA-IRIS 031021A
 Prep Batch ID:
 12379
 Seq No:
 491660

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Antimony	1.10	U	1.00	110	75	125		
Arsenic	1.17	0.035 J	1.00	113	75	125		
Barium	0.220	0.0246	0.200	97.6	75	125		
Cadmium	0.113	0.013 J	0.100	100	75	125		
Chromium	0.458	0.0638	0.400	98.7	75	125		
Lead	1.10	0.095 J	1.00	100	75	125		
Selenium	1.13	U	1.00	113	75	125		
Silver	0.131 S(2n)	0.0983	0.100	32.2	75	125		
Thallium	0.901	U	1.00	90.1	75	125		

2n: MS/MSD and/or RPD are outside acceptable limits - PDS is within limits - matrix interference suspected

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

0310117-1

**Report Number:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

 Project:
 TEAD SWMU 11
 Date Reported:
 10/29/03

 Project ID:
 TEAD SWMU 11
 Work Order:
 0310117

**QC Type:** Matrix Spike Duplicate

 Sample ID:
 0310083-01F MSD
 Analysis Date:
 10/21/03 16:02
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_031021A
 Prep Batch ID:
 12379
 Seq No:
 491661

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RI RPD Li	
Antimony	1.11	U	1.00	111	75	125	1.10	0.33	20
Arsenic	1.15	0.035 J	1.00	112	75	125	1.17	1.6	20
Barium	0.226	0.0246	0.200	101	75	125	0.220	2.8	20
Cadmium	0.112	0.013 J	0.100	98.6	75	125	0.113	1.6	20
Chromium	0.453	0.0638	0.400	97.2	75	125	0.458	1.3	20
Lead	1.12	0.095 J	1.00	102	75	125	1.10	2.0	20
Selenium	1.14	U	1.00	114	75	125	1.13	0.68	20
Silver	0.168 SR(2n)	0.0983	0.100	69.7	75	125	0.131	25	20
Thallium	0.961	U	1.00	96.1	75	125	0.901	6.4	20

2n: MS/MSD and/or RPD are outside acceptable limits - PDS is within limits - matrix interference suspected

**QC Type:** Post Digestion/Distillation Spike

 Sample ID:
 0310083-01F A
 Analysis Date:
 10/21/03 16:06
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_031021A
 Prep Batch ID:
 12379
 Seq No:
 491662

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Antimony	1.07	U	1.00	107	75	125		
Arsenic	1.15	0.035 J	1.00	112	75	125		
Barium	0.228	0.0246	0.200	102	75	125		
Cadmium	0.112	0.013 J	0.100	98.7	75	125		
Chromium	0.440	0.0638	0.400	94.1	75	125		
Lead	1.12	0.095 J	1.00	102	75	125		
Selenium	1.14	U	1.00	114	75	125		
Silver	0.190	0.0983	0.100	91.7	75	125		
Thallium	0.962	U	1.00	96.2	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

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#### **Quality Control Summary**

Client:North Wind Environmental, Inc.Report Number:0310117-1Project:TEAD SWMU 11Date Reported:10/29/03

Project ID: TEAD SWMU 11 Work Order: 0310117

**QC Type:** Serial Dilution

 Sample ID:
 0310083-01F L
 Analysis Date:
 10/21/03 16:12
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_031021A
 Prep Batch ID:
 12379
 Seq No:
 491663

Danamatan	Dogult	Spike Parant	True Percent	Low	High	Duplicate		%D
Parameter	Result	Parent	Value Recovery	Limit	Limit	Parent	70D	Limit
Antimony	U					U	NC	10
Arsenic	U					0.035 J	NC	10
Barium	0.028 JR(6a)					0.025 J	16	10
Cadmium	0.016 JR(6a)					0.013 J	19	10
Chromium	$0.066  \mathrm{J}$					0.064 J	2.9	10
Lead	U					0.095 J	NC	10
Selenium	U					U	NC	10
Silver	$0.0875\mathrm{R}(6\mathrm{a})$					0.0983	11	10
Thallium	U					U	NC	10

6a: Serial dilution not evaluated - result <10x the detection limit

QC Type: Method Blank

 Sample ID:
 PBW-12379
 Analysis Date:
 10/28/03 16:45
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_031028B
 Prep Batch ID:
 12379
 Seq No:
 493050

Parameter	Result	Spike Parent	True Pero Value Reco			0	Duplicate Parent	RPD RPD Limit
Arsenic Lead	0.018 0.00054	0 0	0	0 0	-0.06 -0.06	0.03 0.03		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. Report Number:

0310117-1

Project: TEAD SWMU 11

Project ID:

Run ID:

**Date Reported:** 

10/29/03

**TEAD SWMU 11** 

Work Order:

0310117

Laboratory Control Sample (Water) QC Type:

LCSW-12379 Sample ID:

**Analysis Date:** 

10/28/03 16:49

**Units:** mg/L

TJA-IRIS 031028B Run ID:

Prep Batch ID: 12379

Seq No: 493051

Spike True Percent Low High **Duplicate RPD Parameter** Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit Arsenic 0.985 1.00 98.5 80 120 Lead 0.988 1.00 98.8 80 120

QC Type: Sample Duplicate Sample ID:

0310083-01F D TJA-IRIS 031028B **Analysis Date:** 10/28/03 16:59

**Prep Batch ID:** 12379 Units: mg/L

Seq No: 493053

True Percent RPD Spike Low High **Duplicate** Result **Parent** Parameter Value Recovery Limit Limit Parent **RPD** Limit Arsenic U U NC 20 Lead 0.079 J0.076 J3.9 20

Matrix Spike QC Type:

Sample ID: 0310083-01F MS Run ID: TJA-IRIS\_031028B **Analysis Date:** Prep Batch ID:

10/28/03 17:02

12379

**Units:** mg/L

Seq No: 493054

True Percent RPD Spike **Duplicate** Low High Result **RPD** Limit Parameter **Parent** Value Recovery Limit Limit **Parent** Arsenic 1.18 U 1.00 80 120 118 Lead 1.12 0.076 J1.00 105 80 120

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

North Wind Environmental, Inc. **Client:** 

Report Number:

0310117-1

Project: TEAD SWMU 11 **Date Reported:** 

10/29/03

Project ID: TEAD SWMU 11 Work Order:

0310117

Matrix Spike Duplicate QC Type:

Sample ID: 0310083-01F MSD **Analysis Date:** 10/28/03 17:06 Units: mg/L Seq No: 493055

TJA-IRIS 031028B Run ID:

Prep Batch ID: 12379

Parameter	Result	Spike Parent		Percent Recovery		0	Duplicate Parent	RF RPD Li	
Arsenic	1.18	U	1.00	118	80	120	1.18	0.40	20
Lead	1.10	0.076 J	1.00	102	80	120	1.12	2.1	20

QC Type: Post Digestion/Distillation Spike

Sample ID: 0310083-01F A TJA-IRIS 031028B **Analysis Date:** 10/28/03 17:12

**Prep Batch ID:** 12379 Units: mg/L

Seq No: 493056

Parameter	Result	Spike Parent				0	Duplicate Parent	RPD RPD Limit
Arsenic Lead	1.13 1.11	U 0.076 J	1.00 1.00	113 103	75 75	125 125		

Serial Dilution QC Type:

Run ID:

Sample ID: 0310083-01F L Run ID: TJA-IRIS\_031028B **Analysis Date:** 10/28/03 17:17 Prep Batch ID:

12379

Units: mg/L

Seq No: 493057

True Percent %D Spike **Duplicate** Low High Parameter Result **Parent** Value Recovery Limit Limit **Parent** %D Limit Arsenic U U NC Lead U 0.076 J NC 10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

10



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#### **Quality Control Summary**

Client:North Wind Environmental, Inc.Report Number:0310117-1Project:TEAD SWMU 11Date Reported:10/29/03

Project ID: TEAD SWMU 11 Work Order: 0310117

SW-846 8270C: Semi-Volatiles (USACE), Solid

QC Type: Method Blank

 Sample ID:
 MB-12380
 Analysis Date:
 10/20/03 18:33
 Units:
 μg/Kg

 Run ID:
 HP-5\_031020A
 Prep Batch ID:
 12380
 Seq No:
 491163

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Benz(a)anthracene	U	0	0	0		40		
Benzo(b)fluoranthene	U	0	0	0		80		
bis(2-Ethylhexyl)phthalate	U	0	0	0		60		
Surrogates								
2,4,6-Tribromophenol	6850	0	6640	103	59	112		
2-Fluorophenol	5200	0	6640	78.3	52	96		
2-Fluorobiphenyl	2530	0	3330	76.0	44	92		
Nitrobenzene-d5	2760	0	3400	81.2	46	100		
Phenol-d6	5070	0	6740	75.2	52	91		
Terphenyl-d14	2690	0	3400	79.1	43	111		

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

 Report Number:
 0310117-1

 Date Reported:
 10/29/03

 Work Order:
 0310117

**Project ID:** TEAD SWMU 11

**Project:** 

QC Type: Laboratory Control Spike

TEAD SWMU 11

 Sample ID:
 LCS-12380
 Analysis Date:
 10/20/03 19:04
 Units:
 μg/Kg

 Run ID:
 HP-5\_031020A
 Prep Batch ID:
 12380
 Seq No:
 491165

		Spike		Percent	Low	High	Duplicate	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Acenaphthene	2810		3330	84.3	60	140		
4-Chloro-3-methylphenol	3010		3330	90.4	60	140		
2-Chlorophenol	2990		3330	89.8	60	140		
1,4-Dichlorobenzene	2660		3330	79.9	60	140		
2,4-Dinitrotoluene	3250		3330	97.5	45	140		
N-Nitrosodi-N-propylamine	2750		3330	82.7	45	140		
4-Nitrophenol	2970		3330	89.0	60	140		
Pentachlorophenol	3360		3330	101	45	140		
Phenol	2870		3330	86.2	60	140		
Pyrene	3370		3330	101	60	140		
1,2,4-Trichlorobenzene	2970		3330	89.1	60	140		
Surrogates								
2,4,6-Tribromophenol	7870		6640	118	45	135		
2-Fluorophenol	5640		6640	84.9	45	135		
2-Fluorobiphenyl	2960		3330	88.9	45	135		
Nitrobenzene-d5	3080		3400	90.5	45	135		
Phenol-d6	5550		6740	82.4	45	135		
Terphenyl-d14	2940		3400	86.4	45	135		
~ -								

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

TEAD SWMU 11

Report Number:

Date Reported:

0310117-1 10/29/03

Work Order:

ork Order: 0310117

**QC Type:** Matrix Spike

**Project:** 

**Project ID:** 

**Sample ID:** 0310117-01AMS **Run ID:** HP-5 031020A

**Analysis Date:** 10/20/03 21:06

Prep Batch ID: 12380

**Units:** μg/Kg **Seq No:** 491169

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
				•				
Acenaphthene	2610	U	3330	78.5	60	140		
4-Chloro-3-methylphenol	2970	U	3330	89.3	60	140		
2-Chlorophenol	2800	U	3330	84.0	60	140		
1,4-Dichlorobenzene	2410	U	3330	72.3	60	140		
2,4-Dinitrotoluene	3100	U	3330	93.0	45	140		
N-Nitrosodi-N-propylamine	2590	U	3330	77.8	45	140		
4-Nitrophenol	2960	U	3330	89.0	60	140		
Pentachlorophenol	3230	U	3330	96.9	45	140		
Phenol	2700	U	3330	81.1	60	140		
Pyrene	3640	U	3330	109	60	140		
1,2,4-Trichlorobenzene	2750	U	3330	82.6	60	140		
Surrogates								
2,4,6-Tribromophenol	7900	0	6640	119	45	135		
2-Fluorophenol	5270	0	6640	79.4	45	135		
2-Fluorobiphenyl	2770	0	3330	83.2	45	135		
Nitrobenzene-d5	2860	0	3400	84.1	45	135		
Phenol-d6	5260	0	6740	78.1	45	135		
Terphenyl-d14	3280	0	3400	96.6	45	135		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 0310117-1

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

10/29/03 **Date Reported:** Work Order: 0310117

QC Type: Matrix Spike Duplicate

Sample ID: 0310117-01AMSD **Analysis Date:** HP-5 031020A Run ID:

10/20/03 21:37

Units: μg/Kg

Prep Batch ID: 12380 Seq No: 491171

Parameter	Result	Spike Parent	True Percent Value Recovery		Low Limit	High Limit	Duplicate Parent	RPD RPD Limit	
r ar ameter	Result	rarent			Lillit	Limit		KID LII	ши
Acenaphthene	2600	U	3330	78.1	60	140	2610	0.43	30
4-Chloro-3-methylphenol	3030	U	3330	90.9	60	140	2970	1.8	30
2-Chlorophenol	2780	U	3330	83.6	60	140	2800	0.54	30
1,4-Dichlorobenzene	2320	U	3330	69.7	60	140	2410	3.7	30
2,4-Dinitrotoluene	3340	U	3330	100	45	140	3100	7.6	30
N-Nitrosodi-N-propylamine	2560	U	3330	77.0	45	140	2590	1.1	30
4-Nitrophenol	3260	U	3330	97.8	60	140	2960	9.4	30
Pentachlorophenol	3490	U	3330	105	45	140	3230	8.0	30
Phenol	2680	U	3330	80.5	60	140	2700	0.77	30
Pyrene	3830	U	3330	115	60	140	3640	5.1	30
1,2,4-Trichlorobenzene	2670	U	3330	80.1	60	140	2750	3.1	30
Surrogates									
2,4,6-Tribromophenol	8850	0	6640	133	45	135			
2-Fluorophenol	5270	0	6640	79.4	45	135			
2-Fluorobiphenyl	2740	0	3330	82.2	45	135			
Nitrobenzene-d5	2840	0	3400	83.4	45	135			
Phenol-d6	5300	0	6740	78.6	45	135			
Terphenyl-d14	3440	0	3400	101	45	135			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

**Report Number:** 0310117-1 **Date Reported:** 10/29/03

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

Work Order: 0310117

QC Type: Method Blank

 Sample ID:
 MB-12380
 Analysis Date:
 10/20/03 18:33
 Units:
 μg/Kg

 Run ID:
 HP-5\_031020B
 Prep Batch ID:
 12380
 Seq No:
 491186

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
				,				
Acenaphthene	U	0	0	0		80		
Acenaphthylene	U	0	0	0		70		
Anthracene	U	0	0	0		80		
Benz(a)anthracene	U	0	0	0		70		
Benzo(a)pyrene	U	0	0	0		70		
Benzo(b)fluoranthene	U	0	0	0		70		
Benzo(ghi)perylene	U	0	0	0		60		
Benzo(k)fluoranthene	U	0	0	0		90		
Benzoic acid	U	0	0	0		200		
Benzyl alcohol	U	0	0	0		200		
bis(2-Chloroethoxy)methane	U	0	0	0		80		
bis(2-Chloroethyl)ether	U	0	0	0		200		
bis(2-Chloroisopropyl)ether	U	0	0	0		100		
bis(2-Ethylhexyl)phthalate	U	0	0	0		100		
4-Bromophenyl-phenyl ether	U	0	0	0		80		
Butylbenzyl phthalate	U	0	0	0		80		
4-Chloro-3-methylphenol	U	0	0	0		200		
p-Chloroaniline	U	0	0	0		90		
2-Chloronaphthalene	U	0	0	0		70		
2-Chlorophenol	U	0	0	0		300		
4-Chlorophenyl-phenyl ether	U	0	0	0		80		
Chrysene	U	0	0	0		70		
Di-N-butyl phthalate	U	0	0	0		110		
Di-N-octyl phthalate	U	0	0	0		90		
Dibenz(a,h)anthracene	U	0	0	0		100		
Dibenzofuran	U	0	0	0		80		
Diethyl phthalate	U	0	0	0		80		
1,2-Dichlorobenzene	U	0	0	0		200		
1,3-Dichlorobenzene	U	0	0	0		200		
1,4-Dichlorobenzene	U	0	0	0		200		
3,3'-Dichlorobenzidine	U	0	0	0		110		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environment	al, Inc.			Report Numbe	er: 0310117-1
Project: TEAD SWMU 11	,			Date Reported	: 10/29/03
Project ID: TEAD SWMU 11				Work Order:	0310117
2,4-Dichlorophenol	U	0	0	0	200
Dimethyl phthalate	U	0	0	0	70
2,4-Dimethylphenol	U	0	0	0	200
4,6-Dinitro-2-methylphenol	U	0	0	0	200
2,4-Dinitrophenol	U	0	0	0	200
2,4-Dinitrotoluene	U	0	0	0	80
2,6-Dinitrotoluene	U	0	0	0	50
Fluoranthene	U	0	0	0	80
Fluorene	U	0	0	0	90
Hexachlorobenzene	U	0	0	0	70
Hexachlorobutadiene	U	0	0	0	200
Hexachlorocyclopentadiene	U	0	0	0	70
Hexachloroethane	U	0	0	0	200
Indeno(1,2,3-cd)pyrene	U	0	0	0	70
sophorone	U	0	0	0	90
2-Methylnaphthalene	U	0	0	0	80
2-Methylphenol (o-Cresol)	U	0	0	0	200
and 4- Methylphenol (m+p cresol)	U	0	0	0	200
N-Nitrosodiphenylamine	U	0	0	0	90
N-Nitrosodi-N-propylamine	U	0	0	0	90
Naphthalene	U	0	0	0	100
2-Nitroaniline	U	0	0	0	80
3-Nitroaniline	U	0	0	0	70
1-Nitroaniline	U	0	0	0	70
Nitrobenzene	U	0	0	0	100
2-Nitrophenol	U	0	0	0	300
I-Nitrophenol	U	0	0	0	200
Pentachlorophenol	U	0	0	0	300
Phenanthrene	U	0	0	0	80
Phenol	U	0	0	0	200
Pyrene	U	0	0	0	80
,2,4-Trichlorobenzene	U	0	0	0	200
2,4,5-Trichlorophenol	U	0	0	0	200
,4,6-Trichlorophenol	U	0	0	0	200
Surrogates	(050	^	((50	102	122
2,4,6-Tribromophenol	6850	0	6670	103 49	
2-Fluorophenol	5200	0	6670	77.9 58	8 93

J - Analyte detected below the PQL

R - RPD outside normal precision limits

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: Project: Project ID:	North Wind Environ TEAD SWMU 11 TEAD SWMU 11	mental, Inc.			Report N Date Rep Work Or	orted:	0310117-1 10/29/03 0310117
2-Fluorobiphe	enyl	2530	0	3330	76.0	59	93
Nitrobenzene-	-d5	2760	0	3330	82.9	61	97
Phenol-d6		5070	0	6670	76.0	59	90
Terphenyl-d1	1	2690	0	3330	80.7	57	132

QC Type: Laboratory Control Spike

 Sample ID:
 LCS-12380
 Analysis Date:
 10/20/03 19:04
 Units:
 μg/Kg

 Run ID:
 HP-5\_031020B
 Prep Batch ID:
 12380
 Seq No:
 491187

<b>D</b>	D 1/	Spike		Percent	Low	High	Duplicate	RPD
Parameter	Result	Parent	arent Value Recovery		Limit	Limit	Parent	RPD Limit
Acenaphthene	2810		3330	84.3	59	95		
4-Chloro-3-methylphenol	3010		3330	90.4	67	108		
2-Chlorophenol	2990		3330	89.8	63	94		
1,4-Dichlorobenzene	2660		3330	79.9	55	85		
2,4-Dinitrotoluene	3250		3330	97.5	68	118		
N-Nitrosodi-N-propylamine	2750		3330	82.7	58	89		
4-Nitrophenol	2970		3330	89.0	63	125		
Pentachlorophenol	3360		3330	101	63	132		
Phenol	2870		3330	86.2	58	98		
Pyrene	3370		3330	101	55	114		
1,2,4-Trichlorobenzene	2970 S(8a)		3330	89.1	56	88		
Surrogates								
2,4,6-Tribromophenol	7870		6670	118	49	132		
2-Fluorophenol	5640		6670	84.5	58	93		
2-Fluorobiphenyl	2960		3330	88.9	59	93		
Nitrobenzene-d5	3080		3330	92.4	61	97		
Phenol-d6	5550		6670	83.3	59	90		
Terphenyl-d14	2940		3330	88.2	57	132		

8a: See sample comments.

Sample Comments: LCS has surrogate and spike recovery slightly above QC limits, which may indicate a high bias.

 $<sup>\</sup>boldsymbol{U}$  - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 0310117-1

Project: **TEAD SWMU 11** Project ID: **TEAD SWMU 11** 

**Date Reported:** 10/29/03 Work Order: 0310117

QC Type: Matrix Spike

Run ID:

0310117-01AMS **Analysis Date:** 10/20/03 21:06 Sample ID: HP-5 031020B Prep Batch ID: 12380

Seq No: 491189

μg/Kg

**Units:** 

Spike True Percent Low High **Duplicate** RPD **Parameter** Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit U 78.5 95 Acenaphthene 2610 3330 59 4-Chloro-3-methylphenol 2970 U 3330 89.3 67 108 2-Chlorophenol 2800 U 3330 84.0 63 94 1,4-Dichlorobenzene U 3330 72.3 55 85 2410 2,4-Dinitrotoluene 3100 U 3330 93.0 68 118 89 N-Nitrosodi-N-propylamine 2590 U 3330 77.8 58 4-Nitrophenol 2960 U 3330 89.0 63 125 Pentachlorophenol 3230 U 3330 96.9 63 132 Phenol 2700 U 3330 81.1 58 98 Pyrene 3640 U 3330 109 55 114 U 1,2,4-Trichlorobenzene 2750 3330 82.6 56 88 Surrogates 2,4,6-Tribromophenol 7900 0 6670 118 49 132 2-Fluorophenol 5270 79.0 58 93 0 6670 2-Fluorobiphenyl 83.2 93 2770 0 3330 59 Nitrobenzene-d5 0 3330 85.9 61 97 2860 Phenol-d6 5260 0 6670 78.9 59 90 Terphenyl-d14 3280 3330 98.6 57 132

Sample Comments: MS has a spike recovery slightly above QC limits, which may indicate a high bias.

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

**Report Number:** 0310117-1 **Date Reported:** 10/29/03

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11 **Date Reported:** 10/29/03 **Work Order:** 0310117

QC Type: Matrix Spike Duplicate

 Sample ID:
 0310117-01AMSD
 Analysis Date:
 10/20/03 21:37
 Units:
 μg/Kg

 Run ID:
 HP-5 031020B
 Prep Batch ID:
 12380
 Seq No:
 491190

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	R RPD Li	PD mit
Acenaphthene	2600	U	3330	78.1	59	95	2610	0.43	28
4-Chloro-3-methylphenol	3030	U	3330	90.9	67	108	2970	1.8	37
2-Chlorophenol	2780	U	3330	83.6	63	94	2800	0.54	29
1,4-Dichlorobenzene	2320	U	3330	69.7	55	85	2410	3.7	32
2,4-Dinitrotoluene	3340	U	3330	100	68	118	3100	7.6	22
N-Nitrosodi-N-propylamine	2560	U	3330	77.0	58	89	2590	1.1	55
4-Nitrophenol	3260	U	3330	97.8	63	125	2960	9.4	47
Pentachlorophenol	3490	U	3330	105	63	132	3230	8.0	49
Phenol	2680	U	3330	80.5	58	98	2700	0.77	23
Pyrene	3830 S(8a)	U	3330	115	55	114	3640	5.1	25
1,2,4-Trichlorobenzene	2670	U	3330	80.1	56	88	2750	3.1	28
Surrogates									
2,4,6-Tribromophenol	8850 S(8a)	0	6670	133	49	132			
2-Fluorophenol	5270	0	6670	79.0	58	93			
2-Fluorobiphenyl	2740	0	3330	82.2	59	93			
Nitrobenzene-d5	2840	0	3330	85.2	61	97			
Phenol-d6	5300	0	6670	79.5	59	90			
Terphenyl-d14	3440	0	3330	103	57	132			

8a: See sample comments.

Sample Comments: MSD has a surrogate recovery slightly above QC limits, which may indicate a high bias.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

# North Wind, Inc. Generic Chain of Custody

			empped so.	Airbill:	Name:		
MATRIX	0-	Salt Lake City UT	LTC.	Mountain States And	By Hand		
CONC			ا م	<u> </u>			
ANIAI VEICI	4	3	2	Mark Marin	Relinquished By	Chain of Custody Record	
TAGNOI				~ 10-17-03/16	(Date / Time)	ecord	
NOITATS				Horte Marine 10-17-03/1600 J Glarge W-17-53	Received By	Sampler M. A.	
SAMPLE COLLECT			243	-W-17-63	(Date / Time)	Intr	
	Unit Price:	Lab Contract No:	Transfer To:	Unit Price:	Lab Contract No:	For Lab Use Only	
FOR LAB USE ONLY							

SAMPLE No. SAMPLER	CONC	ANALYSISI TURNAROUND	TAG No./ PRESERVATIVE/Bottles	LOCATION	SAMPLECOLLECT DATE/TIME	Sample Condition On Receipt
S11LP-03-CNF- Soil (0"-12") A1 (かま/かまり)	/G	SVOC 8270C (1)	(lce Only) (1)	S11LP-03-CNF-A1	5: 10/17/2003/ SUPMULTI-CS-01	
\$11LP-03-CNF- Soil (0"-12") A2	<i>(</i> G	SVOC 8270C (1)	(ice Only) (1)	S11LP-03-CNF-A2	5: 10/17/2003/SWMUII-CS-02	
\$11LP-03-CNF- Soil (0"-12") A3	6	SVOC 8270C (1)	(Ice Only) (1)	S11LP-03-CNF-A3	5: 10/17/2003/ SWMULL-CS-03	
\$11LP-03-CNF- Soil (0"-12") A4	ด์	SVOC 8270C (1)	(loe Only) (1)	S11LP-03-CNF-A4	5: 10/17/2003/SWMU(1-CS-04	
S11LP-03-CNF- Soil (0"-12") A5	ິດ	SVOC 8270C (1)	(loe Only) (1)	S11LP-03-CNF-A5	5: 10/17/2003/ SWMUII-C3-05	
\$11WP2-03-CN Soil (0"-12") F-A1 (MS/MSD)	۵	TMET (1)	(Ice Only) (1)	\$11WP2-03-CNF-A1	8: 10/17/2003/SUMMUIL-CS-07	
\$11WP2-03-CN Soil (0"-12") F-A2	ō	TMET (1)	(Ice Only) (1)	S11WP2-03-CNF-A2	s: 10/17/2003/ S w Mac(1-CS-(C) /33#	•
\$11WP2-03-CN Soil (0"-12") F-A3	õ	TMET (1)	(Ice Only) (1)	S11WP2-03-CNF-A3	s: 10/17/2003/ S W M W (( C S ^ ( )	· -
S11WP2-03-CN Soil (0"-12") F-A4	ดั	TMET (1)	(Ice Only) (1)	S11WP2-03-CNF-A4	5: 10/17/2003/ S w Mall-C5-12 /336	
\$11WP2-03-CN Soil (0"-12") F-A5	õ	TMET (1)	(ice Only) (1)	S11WP2-03-CNF-A5	s: 10/17/2003/ S W W W W - C 5 ~ 6 3	, C.

Sampment for Case Sam	Sample(s) to be used for laboratory QC: (MSD) S11 WEX-E3-CNF-A1 (MSD) S11 CP-C 3-CNF-A1 (MSD)	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number:	Yer:
Analysis Key: Col	Concentration: L=Low, M=Low/Medium, H=High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Shipment Iced?	Shipment Iced?

TR Number:

FRORMORY CORY

F2V5.1.045 Page 1 of 2



## **Generic Chain of Custody** North Wind, Inc.

	SDG No:	SD
	Client No:	<u></u>
ş	Reference Case SOWer • \$	짒

			;	Shipped to:		Date Shipped:
MATRIX	c	Salt Lake City UT	LTC.	Mountain States Analytical	by nailu	
CONCI		43	<u> </u>	<u>&amp;</u>		
ANALYSISI	4	3	2	all Dearway	Relinquished By	Chain of Custody Record
TAG No.1				Humber (3. Met altitles 1600)	(Date / Time)	ecord
STATION				18/1052-co-1	Received By	Sampler Signature: (200-)
SAMPLE COLLECT				co-17-03 1600	(Date / Time)	2.h/
CT	Unit Price:	Lab Contract No:	Transfer To:	Unit Price:	Lab Contract No:	For Lab Use Only
FOR LAB USE ONLY						

SAMPLE No.	SAMPLER	TYPE	TURNAROUND	PRESERVATIVE/ Bottles	LOCATION	DATE/TIME	Sample Condition On Receipt
\$11WP2-03-CN Soil (0"-12") F-A6	Soil (0"-12")	õ	TMET (1)	(Ice Only) (1)	S11WP2-03-CNF-A6	5: 10/17/2003/ Swmull-CS-14	
S11WP2-03-CN Soil (0"-12") F-A7	Soil (0"-12")	ີດ	TMET (1)	(loe Only) (1)	\$11WP2-03-CNF-A7	8: 10/17/2003/Swmull-Cs-15	
S11WP2-03-CN Soil (0"-12") F-A8	Soil (0"-12")	6	TMET (1)	(loe Only) (1)	S11WP2-03-CNF-A8	8: 10/17/2003/SWMULLACS-19	
S11WP3-03-CN Soil (0"-12") F-A1	Soil (0"-12")	ີ ດ	TMET (1)	(loe Only) (1)	S11WP3-03-CNF-A1	8: 10/17/2003/SWMU()~CS~(7)	
S11WP3-03-CN Soil (0"-12") F-A2	Soil (0"-12")	6	TMET (1)	(Ice Only) (1)	S11WP3-03-CNF-A2	s: 10/17/2003/SWMUIL-CS-18	
S11WP3-03-CN Soil (0"-12") F-A3	Soil (0"-12")	6	TMET (1)	(Ice Only) (1)	S11WP3-03-CNF-A3	8: 10/17/2003/SWMU11 - CS -17	
S11WP3-03-CN Soil (0"-12") F-A4	Soil (0"-12")	ີດ	TMET (1)	(Ice Only) (1)	S11WP3-03-CNF-A4	5: 10/17/2003/SWMQUI-CS-20 /306	
\$11WP3-03-CN Soil (0"-12") F-A5	Soil (0"-12")	<b>'</b> G	TMET (1)	(Ice Only) (1)	S11WP3-03-CNF-A5	5: 10/17/2003/SWMU11-CS-21	
S11WP3-03-CN Water F-A7	Water	<u>0</u>	TMET (1)	(Ice Only) (1)	S11WP3-03-CNF-A7	5: 10/17/2003 SW MULL YOS ST	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number	)er;
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact?	Shipment Iced?
SVOC 8270C = SVOC 8	SVOC 8270C = SVOC 8270C, TMET = Total Metals				

TR Number:

TR Number: 8-443278439-101603-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: North Wind Inc., 454 Shoup Ave. St 200, Idaho Falls, Idaho 83402, Attn: Tom Matzen, Phone 208/528-8718

LABORATORY COPY
Page 2 of 2



WEPA	North Wind, Inc. Generic Chain of Custody	f Custody		Client No: SDG No:
		Chain of Custady Record Sa	Sampler Air Am H	For Lab Use Only
(Astronomical	by Hand	Relinquished By (Date / Time) Re	Received By (Date / Time)	Lab Contract No:
Shipped to:	Mountain States Analytical	1 Formal (Mat 191703 1600 / Talance 10-17:03,	Talange 10-17-03 1600	( (CD) Unit Price:
	LLC.	2		Transfer To:
	Salt Lake City UT	3		Lab Contract No:
		<b>A</b>		

		3	3
S11LP 03 CNF-	\$11LP-Q3-CNF- Soil (0"-12") A7	\$11LP-03-CNF- Soil (0"-12") A6	SAMPLE No.
Salt (0'-12')	Soil (0"-12")	Soil (0"-12")	MATRIX SAMPLER
6	ົດ	<u>(</u>	CONC
-\$11LP-03-CNF Soil (0"-12") /G \$VOC 8270C (1) (Ice Only) (1)	SVOC 8270C (1) (lce Only) (1)	SVOC 8270C (1) (loe Only) (1)	ANALYSIS/ TURNAROUND
(Ice Only) (1)	(loe Only) (1)	(loe Only) (1)	TAG No. I PRESERVATIVE! Bottles
STILP-03-GNE A8	S11LP-03-CNF-A7	S11LP-03-CNF-A6	STATION LOCATION
S. 1017/2003 SWMALL & STOR	5: 10/17/2003/ Swmull C5-0/	8: 10/17/2003/SWMUTLCS-06	SAMPLE COLLECT DATE/TIME
to ara		3	FOR LAB USE ONLY Sample Condition On Receipt

-	Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number:	Xer:
	analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Shipment Iced?	Shipment Iced?
	SVOC 8270C = SVOC 8270C	270C				

TR Number: 8-443278439-101703-0001

't provides preliminary results. Requests for preliminary results will increase analytical costs. and Copy to: North Wind Inc.. 454 Shoup Ave, St 200, Idaho Falls, Idaho 83402, Attn: Tom Matzen, Phone 208/528-8718 R Number:

ABORATORY COPY

FXV51.045 Page 1 of 1

#### **Mountain States Analytical, LLC**

#### Sample Receipt Checklist

	Environmental		Work Order No. Carrier Number:	0310117
☐ Hand delivered, no cooler	☐ Hand delivered, s	sample(s) taken out at receivin	g counter	
Cooler Information: Non- Ludlum Model 3 Serial #_ Smear Results: Cooler: o Transport Index (1 meter	Ludlum	White I □ Yellow II □ n Model 2929 Scaler Serial #_ Inner Pkg: α/β_ III only)mR/h	Samples:	ALARA: α/β α/β
Cooler Number/ID: Blue - who Condition of Shipping Container: Go Cooler Sealed (taped): Yes C	od Ø <sup>il</sup> Fair ⊡ ù No Øi NotAppl	Radioactivity Reading (if require Damaged (explain) licable 🗆 PID Reading		
Custody Seals Present: Yes C Intac	I No Ø Not Appli t ☐ Broken ☐ Seal Nun	icable 🗅 nber:		
Coolant: Ice 如 Blue I State of Coolant: Frozen 如 Thermometer ID: <u>५</u> 464 R	(ce □ None □ C Partially Frozen □ eading: 10.6 °C	Other:	mp: <u>~</u> ºC 1	emp Blank Induded: Yes Ø No □
Chain-Of-Custody Inform COC Present: COC Number(s):		No 🔾 Other:		
COC signed (relinquished and receiv COC agrees with sample labels: Notes:	Yes <b>1</b> 0	No O Not Applicable O Not Applicable O		
Sample Information: Samples included in cooler: 511	_ AZ \ A''	<u>~ Λ2</u> ~ Αζ	- A7 - A8	- A3_
Custody Seals Present:	Yes □ No Ø			
Sample containers intact: Samples in proper containers: Sufficient sample volume: All samples received in hold time:		Notes:		
Water – VOA's have zero headspace Pre-preserved with HCl: □ Notes:	Pre-preserved w	Not Applicable <b>2</b> ith Na2S2O3: <b>1</b> No	on-Preserved: 🔾	
Water – pH acceptable upon receipt: HNO <sub>3</sub> = <u>4.7</u> H <sub>2</sub> SO <sub>4</sub>	Yes ZÍ Adjusted (	(see comments below) U NaOH = Zn	Not Applicable 🗹 AC /NaOH =	HCL =
Water - pH adjusted: (MSA Trackin HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> Na <sub>2</sub> SO <sub>2</sub> O <sub>3</sub>			-
Notes:				
Cooler Contents Inspected & Ver	•			
Torunfacting	Date:	17.63 Time:	626 Review	red by: <u>LOF</u> Date: 10/17/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

October 31, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11 Work Order: 0310129

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310129-1 and contains 19 pages of information for the 9 samples submitted to MSA on Tuesday, October 21, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 19. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen Senior Project Manager



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Sample Summary**

 Client:
 North Wind Environmental, Inc.
 Report Number:
 0310129-1

 Project:
 TEAD SWMU 11
 Date Reported:
 10/31/03

 Project ID:
 TEAD SWMU 11
 Work Order:
 0310129

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310129-01A	S11WP1-03-CNF-A10		Water	10/20/03
0310129-01B	SDG: NWE-016			11/06/03
0310129-02A	S11WP1-03-CNF-A1		Soil	10/20/03
0310129-03A	S11WP1-03-CNF-A2		Soil	10/20/03
0310129-04A	S11WP1-03-CNF-A3		Soil	10/20/03
0310129-05A	S11WP1-03-CNF-A4		Soil	10/20/03
0310129-06A	S11WP1-03-CNF-A5		Soil	10/20/03
0310129-07A	S11WP1-03-CNF-A6		Soil	10/20/03
0310129-08A	S11WP1-03-CNF-A7		Soil	10/20/03
0310129-09A	S11WP1-03-CNF-A8		Soil	10/20/03

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#### **Holding Time Summary**

 Client:
 North Wind Environmental, Inc.
 Report Number:
 0310129-1

 Project:
 TEAD SWMU 11
 Date Reported:
 10/31/03

 Project ID:
 TEAD SWMU 11
 Work Order:
 0310129

Sample ID **Client Sample ID Date Collected** 10/20/03 14:00 0310129-01A S11WP1-03-CNF-A10 Leachate HT **Start Date End Date Parameter** HT **Prep Date** HT **Analysis Date** Metals by ICP, USACE 10/22/03 09:00 10/30/03 14:53 180 10/20/03 15:24 0310129-02A S11WP1-03-CNF-A1 Leachate **End Date Parameter** Start Date HT **Prep Date** HT **Analysis Date** HT 10/22/03 12:45 Metals by hrICP (USACE) 10/23/03 15:11 180 10/21/03 16:05 Moisture 270 10/20/03 15:37 0310129-03A S11WP1-03-CNF-A2 Leachate **Start Date Parameter End Date** HT **Prep Date** HT**Analysis Date** HT Metals by hrICP (USACE) 10/22/03 12:45 10/23/03 15:46 180 Moisture 10/21/03 16:05 270 10/20/03 15:40 0310129-04A S11WP1-03-CNF-A3 Leachate **Parameter** Start Date **End Date Prep Date Analysis Date** HTMetals by hrICP (USACE) 10/22/03 12:45 10/23/03 15:51 180 10/21/03 16:05 Moisture 270 10/20/03 15:45 0310129-05A S11WP1-03-CNF-A4 Leachate **Prep Date Parameter Start Date End Date** HT **Analysis Date** HT 10/22/03 12:45 Metals by hrICP (USACE) 10/23/03 15:56 180 Moisture 10/21/03 16:05 270 10/20/03 15:50 0310129-06A S11WP1-03-CNF-A5 Leachate **Start Date End Date** HTHT**Parameter Prep Date Analysis Date** Metals by hrICP (USACE) 10/22/03 12:45 10/23/03 16:01 180 Moisture 10/21/03 16:05 270

<sup>\* -</sup> The recommended holding time was exceeded

### Mountain States Analytical, LLC

#### **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Holding Time Summary**

Client:North Wind Environmental, Inc.Report Number:0310129-1Project:TEAD SWMU 11Date Reported:10/31/03Project ID:TEAD SWMU 11Work Order:0310129

Sample ID	Client Sample ID						Date Collec	eted
0310129-07A	S11WP1-03-CNF-A6	Lea	chate				10/20/03 15:	51
Parameter		Start Date	<b>End Date</b>	HT	Prep Date	HT	<b>Analysis Date</b>	HT
Metals by hrIC	P (USACE)				10/22/03 12:45		10/23/03 16:06	180
Moisture							10/21/03 16:05	270
0310129-08A	S11WP1-03-CNF-A7	Lan	chate				10/20/03 15:	55
Parameter		Start Date	End Date	НТ	Prep Date	HT	Analysis Date	НТ
Metals by hrICl	P (USACE)				10/22/03 12:45		10/23/03 16:11	180
Moisture							10/21/03 16:05	270
0310129-09A	S11WP1-03-CNF-A8						10/20/03 15:	59
			chate					
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Metals by hrICl	P (USACE)				10/22/03 12:45		10/23/03 16:16	180
Moisture							10/21/03 16:05	270
Moisture							10/21/03 10.03	



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0310129-1

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-01A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A10

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Water

Purchase Order: COC ID:

Parameter		Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A:	Flame/ICP Prep, Wa	ater						
Prep Batch ID:	12392						10/22/03 09:00	BBO
SW-846 6010B:	Metals by ICP, USA	CE, Water						
Arsenic		U	0.03	0.15	mg/L	1	10/30/03 14:53	JMR
Lead		U	0.03	0.15	mg/L	1	10/30/03 14:53	JMR

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number:

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-02A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A1

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	2.90	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid	d						
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USAC	CE), Solid						
Arsenic	U	1.54	7.88	mg/Kg	1	10/23/03 15:11	JMR
Lead	2.88 J	1.54	7.88	mg/Kg	1	10/23/03 15:11	JMR

Note for 10/23/03 15:11 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-03A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A2

**Date Collected:** 10/20/03

**Report Number:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.29	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, S	olid						
Prep Batch ID: 12394					53	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (US	ACE), Solid						
Arsenic	1.79 J	1.69	8.43	mg/Kg	1	10/23/03 15:46	JMR
Lead	3.06 J	1.69	8.43	mg/Kg	1	10/23/03 15:46	JMR

Note for 10/23/03 15:46 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0310129-1

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-04A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A3

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	8.96	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid	l						
Prep Batch ID: 12394					54	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USAC	E), Solid						
Arsenic	3.73 J	1.76	8.91	mg/Kg	1	10/23/03 15:51	JMR
Lead	2.75 J	1.76	8.91	mg/Kg	1	10/23/03 15:51	JMR

Note for 10/23/03 15:51 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number:

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-05A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A4

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.53	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Soli	d						
Prep Batch ID: 12394					50	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USA)	CE), Solid						
Arsenic	2.23 J	1.52	7.62	mg/Kg	1	10/23/03 15:56	JMR
Lead	2.84 J	1.52	7.62	mg/Kg	1	10/23/03 15:56	JMR

Note for 10/23/03 15:56 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0310129-1

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-06A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A5

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	0.410	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Solid							
Prep Batch ID: 12394					50	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USAC	E), Solid						
Arsenic	2.11 J	1.51	7.57	mg/Kg	1	10/23/03 16:01	JMR
Lead	2.51 J	1.51	7.57	mg/Kg	1	10/23/03 16:01	JMR

Note for 10/23/03 16:01 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number:

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-07A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A6

**Date Collected:** 10/20/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	4.40	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep,	Solid						
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (U	JSACE), Solid						
Arsenic	2.82 J	1.57	7.96	mg/Kg	1	10/23/03 16:06	JMR
Lead	3.24 J	1.57	7.96	mg/Kg	1	10/23/03 16:06	JMR

Note for 10/23/03 16:06 analysis: Results are corrected for dry weight.

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310129

Idaho Falls, ID 83402

Lab Sample ID: 0310129-08A

(208) 528-8718 Client Sample ID: S11WP1-03-CNF-A7

**Date Collected:** 10/20/03

**Report Number:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 07:20

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.50	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, S	Solid						
Prep Batch ID: 12394					52	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (U	SACE), Solid						
Arsenic	1.73 J	1.62	7.97	mg/Kg	1	10/23/03 16:11	JMR
Lead	3.65 J	1.62	7.97	mg/Kg	1	10/23/03 16:11	JMR

Note for 10/23/03 16:11 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

**Purchase Order:** 

**Report Number:** North Wind Environmental, Inc. **Date Reported:** 10/31/03 545 Shoup Avenue Work Order: 0310129 Idaho Falls, ID 83402 Lab Sample ID: 0310129-09A

**Client Sample ID:** (208) 528-8718

S11WP1-03-CNF-A8

**Date Collected:** 10/20/03

**Project: Date Received:** 10/21/03 07:20 TEAD SWMU 11

**Project ID: TEAD SWMU 11** Matrix: Soil

COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	0.740	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 3050B: Flame/hrICP Prep, Soli	d						
Prep Batch ID: 12394					51	10/22/03 12:45	BBO
SW-846 6010B: Metals by hrICP (USAG	CE), Solid						
Arsenic	3.53 J	1.51	7.67	mg/Kg	1	10/23/03 16:16	JMR
Lead	2.72 J	1.51	7.67	mg/Kg	1	10/23/03 16:16	JMR

Note for 10/23/03 16:16 analysis: Results are corrected for dry weight.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310129-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc. Report Number:

Project: TEAD SWMU 11

Project ID: TEAD SWMU 11

Work Order: 0310129

ASTM D2216-92: Moisture, Solid

**QC Type:** Sample Duplicate

 Sample ID:
 0310129-02A DUP
 Analysis Date:
 10/21/03 16:05
 Units:
 %

 Run ID:
 WC\_031021D
 Prep Batch ID:
 R39543
 Seq No:
 491950

Spike True Percent Low High Duplicate RPD
Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Percent Moisture 2.89 2.90 0.34 20

**QC Type:** Sample Duplicate

 Sample ID:
 0310136-02A DUP
 Analysis Date:
 10/21/03 16:05
 Units:
 %

 Run ID:
 WC 031021D
 Prep Batch ID:
 R39543
 Seq No:
 491958

Spike True Percent Low High **Duplicate RPD** Parameter Result **Parent** Value Recovery Limit Limit Parent **RPD** Limit Percent Moisture 6.05 5.89 2.7 20



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#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. Report Number:

0310129-1

Project: TEAD SWMU 11 **Date Reported:** 

10/31/03

Work Order:

0310129

SW-846 6010B: Metals by hrICP (USACE), Solid

QC Type:

Project ID:

Method Blank

**TEAD SWMU 11** 

Sample ID: Run ID:

PBW-12394 TJA-IRIS 031023B

**Analysis Date:** Prep Batch ID:

10/23/03 15:03 12394

**Units:** mg/Kg

Seq No: 492339

Parameter	Result	Spike Parent	True Per Value Rec			0	Duplicate Parent	RPD RPD Limit
Arsenic Lead	-0.017 -0.0057	0 0	0 0	0 0	-0.06 -0.06	0.03 0.03		
		•	0					

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-12394

Run ID:

TJA-IRIS 031023B

**Analysis Date: Prep Batch ID:**  10/23/03 15:06

12394

94.2

**Units:** mg/Kg

Seq No: 492340

Spike True Percent High **Duplicate RPD** Low Parameter Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit 100 93.0 80 120

93.0 Arsenic 94.2 Lead

100

mg/Kg Units:

120

80

Sample Duplicate QC Type: 0310129-02A D Sample ID: TJA-IRIS\_031023B Run ID:

**Analysis Date:** 10/23/03 15:15 12394 Prep Batch ID:

Seq No: 492342

Spike True Percent **Duplicate** RPD Low High Parameter Result **Parent** Parent **RPD** Limit Value Recovery Limit Limit Arsenic 2.3JU NC 35 Lead 3.4J 2.8 J 18 35

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

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### **Quality Control Summary**

**Client:** North Wind Environmental, Inc.

**TEAD SWMU 11** 

**Report Number:** 

0310129-1

Project: TEAD SWMU 11 **Date Reported:** Work Order:

Low

Limit

75

75

10/31/03 0310129

High

Limit

125

125

Matrix Spike Sample ID:

0310129-02A MS

**Analysis Date:** 

10/23/03 15:19

True Percent

Value Recovery

**Units:** mg/Kg

Run ID:

**Parameter** 

QC Type:

Project ID:

TJA-IRIS 031023B

Prep Batch ID:

Spike

**Parent** 

12394

Seq No: 492343

**RPD** 

**RPD** Limit

**Duplicate** 

**Parent** 

104 Arsenic 53.7 U 51.5 Lead 50.6 2.8 J 51.5 92.6

52.7

Result

QC Type: Sample ID:

Run ID:

Matrix Spike Duplicate

0310129-02A MSD TJA-IRIS 031023B **Analysis Date: Prep Batch ID:** 12394

10/23/03 15:22

Units: mg/Kg

Seq No: 492344

True Percent **Duplicate** RPD Spike Low High Result **Parent Parent** Parameter Value Recovery Limit Limit **RPD** Limit Arsenic 51.6 U 51.3 101 75 125 53.7 4.0 35 Lead 50.6 2.8 J 51.3 93.1 75 125 50.6 0.029 35

QC Type:

Lead

Post Digestion/Distillation Spike

Sample ID: Run ID:

0310129-02A A TJA-IRIS\_031023B **Analysis Date:** Prep Batch ID:

10/23/03 15:25 12394

51.0

97.8

75

125

**Units:** mg/Kg

Seq No: 492345

True Percent RPD Spike **Duplicate** Low High Result **Parent** Parameter Value Recovery Limit Limit **Parent RPD** Limit Arsenic 56.6 U 51.0 75 125 111

2.8 J

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 

0310129-1

Project: TEAD SWMU 11 **Date Reported:** Work Order:

10/31/03

0310129

QC Type: Sample ID:

Serial Dilution

0310129-02A L TJA-IRIS 031023B

**TEAD SWMU 11** 

**Analysis Date:** 10/23/03 15:31

**Prep Batch ID:** 12394 **Units:** mg/Kg

Seq No: 492346

**Parameter** 

Project ID:

Result

Spike **Parent**  True Percent

Low High

Low

Limit

-0.06

-0.06

**Duplicate** 

%D %D Limit

Arsenic

Lead

Run ID:

U U

Result

-0.0035

-0.0016

Value Recovery

True Percent

Value Recovery

0

0

Limit Limit

**Parent** 

2.8 J

U

NC 10 NC 10

QC Type: Sample ID: Method Blank PBW-12392

Run ID: TJA61E 031030A **Analysis Date:** 

10/30/03 14:29

Units:

Parent

mg/L

Seq No: 493395

Parameter

**Prep Batch ID:** 

Spike

**Parent** 

0

0

12392

High **Duplicate** Limit

0.03

0.03

High

Limit

120

120

**RPD RPD** Limit

Arsenic Lead

Laboratory Control Sample (Water) QC Type: Sample ID: Run ID: TJA61E\_031030A

LCSW-12392

**Analysis Date:** Prep Batch ID:

Spike

**Parent** 

10/30/03 14:31 12392

0

0

mg/L

**Units:** Seq No: 493396

**Parent** 

RPD **Duplicate** 

Parameter Arsenic

Lead

1.01 0.968

Result

1.00

1.00

True Percent

Value Recovery

101 96.8 80 80

Low

Limit

**RPD** Limit

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 

0310129-1

Project: TEAD SWMU 11

Project ID:

**Date Reported:** 

10/31/03

Work Order:

0310129

Sample Duplicate QC Type:

Sample ID: 0309222-09C D Run ID:

**Analysis Date:** 10/30/03 14:37 **Units:** mg/L

TJA61E 031030A

**TEAD SWMU 11** 

**Prep Batch ID:** 

12392

Seq No: 493398

Spike True Percent Low High **Duplicate RPD Parameter** Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit U U Arsenic NC 20

Lead U U NC 20

QC Type: Matrix Spike

Sample ID: 0309222-09C MS Run ID: TJA61E 031030A **Analysis Date:** 10/30/03 14:41

**Prep Batch ID:** 12392 Units: mg/L

Seq No: 493399

True Percent **RPD** Spike Low High **Duplicate** Result **Parent** Parent **RPD** Limit Parameter Value Recovery Limit Limit U Arsenic 1.11 1.00 111 80 120 Lead 0.928 U 1.00 92.8 80 120

Matrix Spike Duplicate QC Type:

Sample ID: 0309222-09C MSD Run ID: TJA61E\_031030A

**Analysis Date:** 10/30/03 14:44 Prep Batch ID:

12392

**Units:** mg/L

Seq No: 493400

Spike True Percent RPD **Duplicate** Low High Result **Parent Parameter** Value Recovery Limit Limit **Parent RPD** Limit Arsenic 1.10 U 1.00 80 120 0.40 20 110 1.11 Lead 0.930 U 1.00 93.0 80 120 0.928 0.27 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



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### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Report Number:

0310129-1

**Project:** TEAD SWMU 11

**Date Reported:** 

10/31/03

Project ID: TEAD SWMU 11

Work Order:

0310129

QC Type: Post Digestion/Distillation Spike

**Sample ID:** 0309222-**Run ID:** TJA61E

0309222-09C A TJA61E 031030A **Analysis Date:** 10/30/03 14:47

Prep Batch ID: 12392

Units: mg/L Seq No: 493401

Spike True Percent Low High **Duplicate** RPD **Parameter** Result **Parent** Value Recovery Limit Limit Parent **RPD** Limit U 108 Arsenic 1.08 1.00 75 125 Lead 0.916 U 1.00 91.6 75 125

QC Type: Serial Dilution

**Sample ID:** 0309222-09C L **Run ID:** TJA61E 031030A

**Analysis Date:** 10/30/03 14:50

Prep Batch ID: 12392

Units: mg/L

Seq No: 493402

Parameter	Result	Spike Parent	True Percent Value Recovery	0	Duplicate Parent	%l %D Liı	
Arsenic	U				U	NC	10
Lead	U				U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



SAMPLE No.

MATRIXI SAMPLER

CONC

ANALYSIS/ TURNAROUND

TAG No.!
PRESERVATIVE! Bottles

STATION LOCATION

SAMPLE COLLECT
DATE/11 ME

FOR LAB USE ONLY Sample Condition On Receipt

SEPA	North Wind, Inc. Generic Chain of Custody	f Custody		Reference Case SOW02 Client No: SDG No:
Date Shipped:		Chain of Custody Record	Sampler Signature:	For Lab Use Only
Callies Name.	by mano	Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No:
Shipped to:	Mountain States Analytical	1 Almos a Mother 10/21/030	Thomas a Mate 10/24/03 or 20 + time 11 Olden 10/31/03 0730 unit Price:	Unit Price:
:	LLC.	2		Transfer To:
	Salt Lake City UT	3		Lab Contract No:
	C	4		

15:59	S: 10/20/2003	S11WP1-03-CNF-A8	(Ice Only) (1)	TMET (1)	<u>آ</u>	\$11WP1-03-CN Soil (0"-12") F-A8
15:55	S: 10/20/2003	S11WP1-03-CNF-A7	(loe Only) (1)	TMET (1)	<u>آ</u>	\$11WP1-03-CN Soil (0"-12") F-A7
15:51	S: 10/20/2003	S11WP1-03-CNF-A6	(loe Only) (1)	TMET (1)	ରି	S11WP1-03-CN Soif (0"-12") F-A6
15:50	S: 10/20/2003	S11WP1-03-CNF-A5	(Ice Only) (1)	TMET (1)	ด์	\$11WP1-03-CN Soil (0"-12") F-A5
15:45	S: 10/20/2003	S11WP1-03-CNF-A4	<del>(Ice Only) (</del> 1)	TMET (1)	ີດ	\$11WP1-03-CN Soil (0"-12") F-A4
15:40	S: 10/20/2003	10/20103 S11WP1-03-CNF-A3	(160 Only) (1)	TMET (1)	<u>ه</u>	S11WP1-03-CN Soil (0"-12") F-A3
15:37	S: 10/20/2003	S11WP1-03-CNF-A2	( <del>loe Only)(1)</del> / ア	TMET (1)	<u>آ</u>	S11WP1-03-CN Soil (0"-12") F-A2
14:00	S: 10/20/2003	(Not preserved) (1) / 1 NO3 S11WP1-03-CNF-A10	(Not preserved)	TMET (1)	Ģ	S11WP1-03-CN Water/ F-A10 Tom Matzen
15:24	S: 10/20/2003	(Ice Only) (1) - 701 /2/20/4/511WP1-03-CNF-A1		TMET (1) PA	G,	\$11WP1-03-CN Soil (0"-12") F-A1 MS/MS

Shipment for Case	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature	Chain of Custody Seal Number:	ber:
-	S//WP1-03-CNF-A1		Upon Receipt		
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite ≈ C, Grab = G		Custody Seal Intact? Shipment Iced?	Shipment Iced?
TMET = Total Metals					

TR Number: 8-443278439-102003-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Find Copy to: North Wind Inc., 454 Shoup Ave, St 200, Idaho Falls, Idaho 83402, Attn: Tom Matzen, Phone 208/528-8718 TR Number:

ABORATORY COPY

FXXX.1.045 Page 1 of 1

# **Mountain States Analytical, LLC**

### Sample Receipt Checklist

Carrier: Northwind	Chv.		Work Order No. Carrier Number:	<u>0310129</u>
☐ Hand delivered, no cooler	Hand delivered	d, sample(s) taken out at receivi	ng counter	
Cooler Information: Non-Ra Ludium Model 3 Serial # Smear Results: Cooler: \( \alpha \) Transport Index (1 meter re-	Ludl	D White I □ Yellow II € elum Model 2929 Scaler Serial # Inner Pkg: α/β & III only)mR	Samples	ALARA: α/β : α/β
Cooler Number/ID: Rod Condition of Shipping Container: Good Cooler Sealed (taped): Yes   Custody Seals Present: Yes	Fair C No D Not Ap	e Radioactivity Reading (if requi Damaged (explain) pplicable D PID Reading		
Coolant: Ice C Blue Ice State of Coolant: Frozen C Thermometer ID: Reac	Broken □ Seal N □ None □ Partially Frozen □ ling:°C	Other: Melted CI CF: Corrected T	emp:ºC	Temp Blank Included: Yes □ No □
Packing Description: Sample ja	rs wrapped	Lwith absorbant i	Cloth.	·
Chain-Of-Custody Informat COC Present: COC Number(s): COC signed (relinquished and received) COC agrees with sample labels: Notes:	Yes Z Yes Z Yes Z	No □ Not Applicable □		
Sample Information: Samples included in cooler:S// W	PI-03-CNF-1 PI-03-CNF-1	AIO		
Custody Seals Present:	Yes  No Cl Intact  Broken	Not Applicable 🗅 Other _		
Sample containers intact: Samples in proper containers: Sufficient sample volume: All samples received in hold time:	Yes O No O Yes O No O Yes O No O Yes O No O			
Water VOA's have zero headspace: Pre-preserved with HCl: □ Notes:				
Water – pH acceptable upon receipt: You HNO <sub>3</sub> = H <sub>2</sub> SO <sub>4</sub> =	es 🔏 Adjuste	ed (see comments below)  NaOH =	Not Applicable 🗅 ZnAC /NaOH =	HCL =
Water - pH adjusted: (MSA Tracking I HNO <sub>3</sub> ZnAC Notes:	H <sub>2</sub> SO <sub>4</sub> Na <sub>2</sub> SO <sub>2</sub> O <sub>3</sub>			<del></del>
Cooler Contents Inspected & Verifi	-	103 Time:	<i>0133</i> Revie	ewed by: A Date: 10/31/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

October 31, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11 Work Order: 0310136

Project ID: TEAD SWMU 11

Dear Thomas Matzen,

Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0310136-1 and contains 27 pages of information for the 9 samples submitted to MSA on Tuesday, October 21, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 27. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen Senior Project Manager



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Sample Summary**

Client:North Wind Environmental, Inc.Report Number:0310136-1Project:TEAD SWMU 11Date Reported:10/31/03Project ID:TEAD SWMU 11Work Order:0310136

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0310136-01A	S11SP-03-CNF-A10		Water	10/21/03
0310136-01B	SDG: NWE-017			11/05/03
0310136-02A	S11SP-03-CNF-A1		Soil	10/21/03
0310136-03A	S11SP-03-CNF-A2		Soil	10/21/03
0310136-04A	S11SP-03-CNF-A3		Soil	10/21/03
0310136-05A	S11SP-03-CNF-A4		Soil	10/21/03
0310136-06A	S11SP-03-CNF-A5		Soil	10/21/03
0310136-07A	S11SP-03-CNF-A6		Soil	10/21/03
0310136-08A	S11SP-03-CNF-A7		Soil	10/21/03
0310136-09A	S11SP-03-CNF-A8		Soil	10/21/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

**Project ID:** TEAD SWMU 11

**Project:** 

**Report Number:** 0310136-1

**Date Reported:** 10/31/03

**Work Order:** 0310136

Sample ID	Client Sample ID						Date Collec	cted
0310136-01A	S11SP-03-CNF-A10	Leac	chate				10/21/03 10	:00
Parameter		Start Date	<b>End Date</b>	HT	Prep Date	HT	<b>Analysis Date</b>	HT
Semi-Volatiles	(USACE)				10/25/03 13:00	7	10/30/03 22:31	40
0310136-02A	S11SP-03-CNF-A1	T	chate				10/21/03 10	:53
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture							10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 02:37	40
0310136-03A	S11SP-03-CNF-A2	<b>T</b>	D. 4.				10/21/03 10	:55
Parameter		Start Date	chate End Date	НТ	Prep Date	нт	Analysis Date	нт
Moisture					1		10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 04:06	40
0310136-04A	S11SP-03-CNF-A3	Tan	chate				10/21/03 10	:58
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture					•		10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 04:35	40
0310136-05A	S11SP-03-CNF-A4	Tan	.hd.				10/21/03 11	:00
Parameter		Start Date	chate End Date	НТ	Prep Date	нт	Analysis Date	нт
Moisture							10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 05:05	40
0310136-06A	S11SP-03-CNF-A5						10/21/03 11	:03
D 4			chate	ш	D D (	TTT	4 1 . 5 .	TTT
Parameter Moisture		Start Date	End Date	НТ	Prep Date	НТ	<b>Analysis Date</b> 10/21/03 16:05	HT
wioisture	(USACE)						10/21/03 16:05	270 40

<sup>\* -</sup> The recommended holding time was exceeded

# Mountain States Analytical, LLC

# **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

Report Number:

0310136-1

**Project:** TEAD SWMU 11

**Project ID:** 

**Date Reported:** 

10/31/03

Work Order:

0310136

Sample ID	Client Sample ID						Date Collec	eted
0310136-07A	S11SP-03-CNF-A6	Lag	chate				10/21/03 11	:05
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture					•		10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 06:04	40
0310136-08A	S11SP-03-CNF-A7	Lag	chate				10/21/03 11	:08
Parameter		Start Date	End Date	НТ	Prep Date	НТ	Analysis Date	НТ
Moisture							10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 06:33	40
0310136-09A	S11SP-03-CNF-A8						10/21/03 11	:11
			chate					
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Moisture							10/21/03 16:05	270
Semi-Volatiles	(USACE)				10/21/03 16:00	14	10/22/03 07:03	40



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0310136-1

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-01A

(208) 528-8718 Client Sample ID: S11SP-03-CNF-A10

**Date Collected:** 10/21/03

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Water

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles (U	SACE), Water						
Benz(a)anthracene	U	3.1	7.69	μg/L	1	10/30/03 22:31	KPF
Benzo(b)fluoranthene	U	3.1	7.69	μg/L	1	10/30/03 22:31	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	93.3	41	-146	% Recovery	1	10/30/03 22:31	KPF
2-Fluorophenol	38.2	30	0-68	% Recovery	1	10/30/03 22:31	KPF
2-Fluorobiphenyl	61.8	4	7-97	% Recovery	1	10/30/03 22:31	KPF
Nitrobenzene-d5	66.2	50	6-98	% Recovery	1	10/30/03 22:31	KPF
Phenol-d6	31.2	23	3-44	% Recovery	1	10/30/03 22:31	KPF
Terphenyl-d14	58.6	37	-116	% Recovery	1	10/30/03 22:31	KPF
SW-846 3510C/EPA 625: Separat	ory Funnel Liq/Liq Ex	t., SV, Water					
Prep Batch ID: 12401						10/22/03 11:00	RJS
Prep Batch ID: 12418					1.5	10/25/03 13:00	SBC

Note for 10/22/03 11:00 analysis: Extraction order was Acid-Base-Neutral.

Note for 10/25/03 13:00 analysis: Extraction order was Acid-Base-Neutral. Sample is a re-extract.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

10/21/03

S11SP-03-CNF-A1

**Report Number:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-02A

(208) 528-8718 Client Sample ID:

Date Collected:

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	5.89	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (US	ACE), Solid						
Benz(a)anthracene	U	42.5	351	μg/Kg	1	10/22/03 02:37	KPF
Benzo(b)fluoranthene	U	85	351	μg/Kg	1	10/22/03 02:37	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	109	45	5-135	% Recovery	1	10/22/03 02:37	KPF
2-Fluorophenol	64.5	45	5-135	% Recovery	1	10/22/03 02:37	KPF
2-Fluorobiphenyl	65.1	45	5-135	% Recovery	1	10/22/03 02:37	KPF
Nitrobenzene-d5	67.9	45	5-135	% Recovery	1	10/22/03 02:37	KPF
Phenol-d6	62.0	45	5-135	% Recovery	1	10/22/03 02:37	KPF
Terphenyl-d14	80.7	45	5-135	% Recovery	1	10/22/03 02:37	KPF

Note for 10/22/03 02:37 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

S11SP-03-CNF-A2

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-03A

**Date Collected:** 10/21/03

**Report Number:** 

**Client Sample ID:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid	I						
Percent Moisture	11.4	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (U	JSACE), Solid						
Benz(a)anthracene	U	45.1	372	μg/Kg	1	10/22/03 04:06	KPF
Benzo(b)fluoranthene	U	90.3	372	μg/Kg	1	10/22/03 04:06	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	94.8	45	5-135	% Recovery	1	10/22/03 04:06	KPF
2-Fluorophenol	61.5	45	5-135	% Recovery	1	10/22/03 04:06	KPF
2-Fluorobiphenyl	63.1	45	5-135	% Recovery	1	10/22/03 04:06	KPF
Nitrobenzene-d5	64.6	45	5-135	% Recovery	1	10/22/03 04:06	KPF
Phenol-d6	59.1	45	5-135	% Recovery	1	10/22/03 04:06	KPF
Terphenyl-d14	68.4	45	5-135	% Recovery	1	10/22/03 04:06	KPF

Note for 10/22/03 04:06 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

S11SP-03-CNF-A3

10/21/03 14:30

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-04A

Date Collected: 10/21/03

**Report Number:** 

**Client Sample ID:** 

Project: TEAD SWMU 11 Date Received:

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	9.78	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (US	SACE), Solid						
Benz(a)anthracene	U	44.3	366	μg/Kg	1	10/22/03 04:35	KPF
Benzo(b)fluoranthene	U	88.7	366	μg/Kg	1	10/22/03 04:35	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	109	<b>Recovery Range</b> 45-135		% Recovery	1	10/22/03 04:35	KPF
2-Fluorophenol	68.5	45	5-135	% Recovery	1	10/22/03 04:35	KPF
2-Fluorobiphenyl	67.7	45	5-135	% Recovery	1	10/22/03 04:35	KPF
Nitrobenzene-d5	72.0	45	5-135	% Recovery	1	10/22/03 04:35	KPF
Phenol-d6	65.7	45	5-135	% Recovery	1	10/22/03 04:35	KPF
Terphenyl-d14	82.6	45	5-135	% Recovery	1	10/22/03 04:35	KPF

Note for 10/22/03 04:35 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

S11SP-03-CNF-A4

10/21/03 14:30

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

**Report Number:** North Wind Environmental, Inc. **Date Reported:** 10/31/03 545 Shoup Avenue Work Order: 0310136 Idaho Falls, ID 83402 Lab Sample ID: 0310136-05A

> **Date Collected:** 10/21/03

**Client Sample ID:** 

**Date Received:** 

**Project:** TEAD SWMU 11 Project ID:

(208) 528-8718

**TEAD SWMU 11** Matrix: Soil

**Purchase Order:** 

COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid	d						
Percent Moisture	1.55	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (U	USACE), Solid						
Benz(a)anthracene	U	40.6	335	μg/Kg	1	10/22/03 05:05	KPF
Benzo(b)fluoranthene	U	81.3	335	μg/Kg	1	10/22/03 05:05	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	103	45	5-135	% Recovery	1	10/22/03 05:05	KPF
2-Fluorophenol	64.6	45	5-135	% Recovery	1	10/22/03 05:05	KPF
2-Fluorobiphenyl	66.7	45	5-135	% Recovery	1	10/22/03 05:05	KPF
Nitrobenzene-d5	69.8	45	5-135	% Recovery	1	10/22/03 05:05	KPF
Phenol-d6	62.2	45	5-135	% Recovery	1	10/22/03 05:05	KPF
Terphenyl-d14	84.2	45	5-135	% Recovery	1	10/22/03 05:05	KPF
Note for 10/22/03 05:05 analysis:		· dry weight		, , , , , , , , , , , , , , , , , , , ,			

Note for 10/22/03 05:05 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

10/21/03

S11SP-03-CNF-A5

**Report Number:** 

**Date Collected:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-06A

(208) 528-8718 Client Sample ID:

Project: TEAD SWMU 11 Date Received: 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	DF Date Analyzed	
ASTM D2216-92: Moisture, Solid	l						
Percent Moisture	1.97	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (U	JSACE), Solid						
Benz(a)anthracene	U	40.8	337	μg/Kg	1	10/22/03 05:34	KPF
Benzo(b)fluoranthene	U	81.6	337	μg/Kg	1	10/22/03 05:34	KPF
Surrogates		Recove	ery Range				
2,4,6-Tribromophenol	120	45	5-135	% Recovery	1	10/22/03 05:34	KPF
2-Fluorophenol	78.0	45	5-135	% Recovery	1	10/22/03 05:34	KPF
2-Fluorobiphenyl	78.3	45	5-135	% Recovery	1	10/22/03 05:34	KPF
Nitrobenzene-d5	80.2	45	5-135	% Recovery	1	10/22/03 05:34	KPF
Phenol-d6	74.9	45	5-135	% Recovery	1	10/22/03 05:34	KPF
Terphenyl-d14	87.2	45	5-135	% Recovery	1	10/22/03 05:34	KPF

Note for 10/22/03 05:34 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-07A

Client Sample ID: S11SP-03-CNF-A6

Date Collected: 10/21/03

**Report Number:** 

**Project:** TEAD SWMU 11 **Date Received:** 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							
Percent Moisture	1.69	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (US	SACE), Solid						
Benz(a)anthracene	U	40.7	336	μg/Kg	1	10/22/03 06:04	KPF
Benzo(b)fluoranthene	U	81.4	336	μg/Kg	1	10/22/03 06:04	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	115	45	5-135	% Recovery	1	10/22/03 06:04	KPF
2-Fluorophenol	73.6	45	5-135	% Recovery	1	10/22/03 06:04	KPF
2-Fluorobiphenyl	75.7	45	5-135	% Recovery	1	10/22/03 06:04	KPF
Nitrobenzene-d5	78.8	45	5-135	% Recovery	1	10/22/03 06:04	KPF
Phenol-d6	70.0	45	5-135	% Recovery	1	10/22/03 06:04	KPF
Terphenyl-d14	80.3	45	5-135	% Recovery	1	10/22/03 06:04	KPF

Note for 10/22/03 06:04 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc.

Date Reported: 10/31/03

545 Shoup Avenue

Work Order: 0310136

Idaho Falls, ID 83402

Lab Sample ID: 0310136-08A

Client Sample ID: S11SP-03-CNF-A7

Date Collected: 10/21/03

**Report Number:** 

Project: TEAD SWMU 11 Date Received: 10/21/03 14:30

Project ID: TEAD SWMU 11 Matrix: Soil

Purchase Order: COC ID:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid	l						
Percent Moisture	3.42	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (U	(SACE), Solid						
Benz(a)anthracene	U	41.4	342	μg/Kg	1	10/22/03 06:33	KPF
Benzo(b)fluoranthene	U	82.8	342	μg/Kg	1	10/22/03 06:33	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	114	45	5-135	% Recovery	1	10/22/03 06:33	KPF
2-Fluorophenol	69.5	45	5-135	% Recovery	1	10/22/03 06:33	KPF
2-Fluorobiphenyl	72.8	45	5-135	% Recovery	1	10/22/03 06:33	KPF
Nitrobenzene-d5	70.6	45	5-135	% Recovery	1	10/22/03 06:33	KPF
Phenol-d6	66.2	45	5-135	% Recovery	1	10/22/03 06:33	KPF
Terphenyl-d14	82.2	45	5-135	% Recovery	1	10/22/03 06:33	KPF

Note for 10/22/03 06:33 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



0310136-1

10/21/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**Client:** Thomas Matzen

(208) 528-8718

North Wind Environmental, Inc. **Date Reported:** 10/31/03 545 Shoup Avenue Work Order: 0310136 Idaho Falls, ID 83402 Lab Sample ID: 0310136-09A

> **Client Sample ID:** S11SP-03-CNF-A8 **Date Collected:**

**Report Number:** 

**Project: Date Received:** 10/21/03 14:30 TEAD SWMU 11

Project ID: **TEAD SWMU 11** Matrix: Soil

COC ID: **Purchase Order:** 

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
ASTM D2216-92: Moisture, Solid							_
Percent Moisture	9.76	0.01	0.01	%	1	10/21/03 16:05	SSJ
SW-846 8270C: Semi-Volatiles (USA	ACE), Solid						
Benz(a)anthracene	U	44.3	366	μg/Kg	1	10/22/03 07:03	KPF
Benzo(b)fluoranthene	U	88.7	366	μg/Kg	1	10/22/03 07:03	KPF
Surrogates		Recove	ry Range				
2,4,6-Tribromophenol	107	45	5-135	% Recovery	1	10/22/03 07:03	KPF
2-Fluorophenol	54.9	45	5-135	% Recovery	1	10/22/03 07:03	KPF
2-Fluorobiphenyl	58.9	45	5-135	% Recovery	1	10/22/03 07:03	KPF
Nitrobenzene-d5	58.5	45	5-135	% Recovery	1	10/22/03 07:03	KPF
Phenol-d6	53.7	45	5-135	% Recovery	1	10/22/03 07:03	KPF
Terphenyl-d14	76.4	45	5-135	% Recovery	1	10/22/03 07:03	KPF

Note for 10/22/03 07:03 analysis: Results are corrected for dry weight.

SW-846 3550B: Ultrasonic Extraction, SV, Solid

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level



10/31/03

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

North Wind Environmental, Inc. **Client:** 

**Report Number:** 0310136-1

Project: TEAD SWMU 11 Project ID: **TEAD SWMU 11** 

**Date Reported:** Work Order: 0310136

ASTM D2216-92: Moisture, Solid

Sample Duplicate QC Type:

0310129-02A DUP Sample ID: **Analysis Date:** 10/21/03 16:05 **Units:** 

Run ID: WC 031021D Prep Batch ID: R39543 Seq No: 491950

True Percent **RPD** Spike Low High **Duplicate Parameter** Result **Parent** Value Recovery Limit **Parent RPD** Limit Limit

Percent Moisture 2.89 2.90 20 0.34

QC Type: Sample Duplicate

Sample ID: 0310136-02A DUP **Analysis Date:** 10/21/03 16:05 Units: Run ID: WC 031021D **Prep Batch ID:** R39543 Seq No: 491958

Spike True Percent Low High **Duplicate RPD** Parameter Result **Parent** Value Recovery Limit Limit Parent **RPD** Limit Percent Moisture 6.05 5.89 2.7 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range



0310136-1

**Report Number:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

 TEAD SWMU 11
 Date Reported:
 10/31/03

 TEAD SWMU 11
 Work Order:
 0310136

SW-846 8270C: Semi-Volatiles (USACE), Solid

QC Type: Method Blank

**Project:** 

**Project ID:** 

 Sample ID:
 MB-12391
 Analysis Date:
 10/22/03 01:38
 Units:
 μg/Kg

 Run ID:
 HP-5\_031021B
 Prep Batch ID:
 12391
 Seq No:
 491854

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Benz(a)anthracene	U	0	0	0		40		
Benzo(b)fluoranthene	U	0	0	0		80		
Surrogates								
2,4,6-Tribromophenol	7190	0	6640	108	59	112		
2-Fluorophenol	4600	0	6640	69.3	52	96		
2-Fluorobiphenyl	2350	0	3330	70.6	44	92		
Nitrobenzene-d5	2540	0	3400	74.7	46	100		
Phenol-d6	4460	0	6740	66.1	52	91		
Terphenyl-d14	2650	0	3400	78.0	43	111		

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client:North Wind Environmental, Inc.Report Number:0310136-1Project:TEAD SWMU 11Date Reported:10/31/03Project ID:TEAD SWMU 11Work Order:0310136

QC Type: Laboratory Control Spike

 Sample ID:
 LCS-12391
 Analysis Date:
 10/22/03 02:08
 Units:
 μg/Kg

 Run ID:
 HP-5\_031021B
 Prep Batch ID:
 12391
 Seq No:
 491855

		Spike		Percent	Low	High	<b>Duplicate</b>	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Acenaphthene	2460		3330	73.9	60	140		
4-Chloro-3-methylphenol	2740		3330	82.1	60	140		
2-Chlorophenol	2230		3330	66.9	60	140		
1,4-Dichlorobenzene	1970 S(8a)		3330	59.1	60	140		
2,4-Dinitrotoluene	3400		3330	102	45	140		
N-Nitrosodi-N-propylamine	2080		3330	62.3	45	140		
4-Nitrophenol	3070		3330	92.2	60	140		
Pentachlorophenol	3480		3330	104	45	140		
Phenol	2160		3330	64.7	60	140		
Pyrene	3430		3330	103	60	140		
1,2,4-Trichlorobenzene	2230		3330	66.9	60	140		
Surrogates								
2,4,6-Tribromophenol	7950		6640	120	45	135		
2-Fluorophenol	4160		6640	62.6	45	135		
2-Fluorobiphenyl	2280		3330	68.4	45	135		
Nitrobenzene-d5	2280		3400	67.2	45	135		
Phenol-d6	4110		6740	61.0	45	135		
Terphenyl-d14	2910		3400	85.6	45	135		

8a: See sample comments.

Sample Comments: The LCS recovery for 1,4-Dichlorobenzene may indicate a slight low bias for similar compounds.

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

**TEAD SWMU 11** 

Report Number:

0310136-1

**Project:** TEAD SWMU 11

Date Reported:

10/31/03

Work Order:

0310136

QC Type: Matrix Spike

**Project ID:** 

**Sample ID:** 0310136-02AMS **Run ID:** HP-5 031021B

**Analysis Date:** 10/22/03 03:07

**Units:** μg/Kg **Seq No:** 491857

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Acenaphthene	2580	U	3330	77.6	60	140		
4-Chloro-3-methylphenol	2980	U	3330	89.6	60	140		
2-Chlorophenol	2550	U	3330	76.7	60	140		
1,4-Dichlorobenzene	2230	U	3330	66.8	60	140		
2,4-Dinitrotoluene	3500	U	3330	105	45	140		
N-Nitrosodi-N-propylamine	2370	U	3330	71.1	45	140		
4-Nitrophenol	3210	U	3330	96.3	60	140		
Pentachlorophenol	3490	U	3330	105	45	140		
Phenol	2470	U	3330	74.3	60	140		
Pyrene	3390	U	3330	102	60	140		
1,2,4-Trichlorobenzene	2560	U	3330	76.9	60	140		
Surrogates								
2,4,6-Tribromophenol	8440	0	6640	127	45	135		
2-Fluorophenol	4730	0	6640	71.2	45	135		
2-Fluorobiphenyl	2590	0	3330	77.7	45	135		
Nitrobenzene-d5	2590	0	3400	76.3	45	135		
Phenol-d6	4660	0	6740	69.1	45	135		
Terphenyl-d14	2870	0	3400	84.3	45	135		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

μg/Kg

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 0310136-1 10/31/03 **Date Reported:** 

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

Work Order: 0310136

QC Type: Matrix Spike Duplicate

Sample ID: 0310136-02AMSD **Analysis Date:** 10/22/03 03:36 Units: HP-5 031021B Run ID: Prep Batch ID: 12391 Seq No: 491875

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RI RPD Li	
- W. W	1105410	1 111 0110	,	11000 (01)		2,,,,,,	1 111 0110	111 2 21	
Acenaphthene	2550	U	3330	76.5	60	140	2580	1.5	30
4-Chloro-3-methylphenol	2910	U	3330	87.4	60	140	2980	2.4	30
2-Chlorophenol	2590	U	3330	77.6	60	140	2550	1.3	30
1,4-Dichlorobenzene	2320	U	3330	69.6	60	140	2230	4.0	30
2,4-Dinitrotoluene	3510	U	3330	105	45	140	3500	0.22	30
N-Nitrosodi-N-propylamine	2350	U	3330	70.7	45	140	2370	0.66	30
4-Nitrophenol	3190	U	3330	95.7	60	140	3210	0.62	30
Pentachlorophenol	3370	U	3330	101	45	140	3490	3.4	30
Phenol	2420	U	3330	72.7	60	140	2470	2.2	30
Pyrene	3410	U	3330	102	60	140	3390	0.50	30
1,2,4-Trichlorobenzene	2540	U	3330	76.4	60	140	2560	0.61	30
Surrogates									
2,4,6-Tribromophenol	8470	0	6640	128	45	135			
2-Fluorophenol	4770	0	6640	71.9	45	135			
2-Fluorobiphenyl	2510	0	3330	75.4	45	135			
Nitrobenzene-d5	2580	0	3400	76.0	45	135			
Phenol-d6	4580	0	6740	67.9	45	135			
Terphenyl-d14	2970	0	3400	87.3	45	135			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

**Client:** North Wind Environmental, Inc.

TEAD SWMU 11

**Report Number:** 0310136-1

**Project:** TEAD SWMU 11

10/31/03 **Date Reported:** Work Order: 0310136

QC Type: Method Blank

Project ID:

Sample ID: MB-12418 10/30/03 21:31

Units: µg/L

HP-5 031030A Run ID:

**Analysis Date:** Prep Batch ID: 12418

Seq No: 493674

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Benz(a)anthracene	U	0	0	0		1		
Benzo(b)fluoranthene	U	0	0	0		1		
Surrogates								
2,4,6-Tribromophenol	163	0	200	81.3	41	146		
2-Fluorophenol	70.4	0	200	35.2	30	68		
2-Fluorobiphenyl	102 S(8a)	0	100	102	47	97		
Nitrobenzene-d5	122 S(8a)	0	100	122	56	98		
Phenol-d6	50.1	0	200	25.1	23	44		
Terphenyl-d14	81.4	0	100	81.4	37	116		

8a: See sample comments.

Sample Comments: MB had slightly high surrogate recoveries which were isolated to it. Did not affect data.

S -Results outside normal recovery limits

0310136-1

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Project: TEAD SWMU 11

**Date Reported:** 10/31/03 **Work Order:** 0310136

**Report Number:** 

Project ID: TEAD SWMU 11

QC Type: Laboratory Control Spike

 Sample ID:
 LCS-12418
 Analysis Date:
 10/30/03 22:01
 Units:
 μg/L

 Run ID:
 HP-5\_031030A
 Prep Batch ID:
 12418
 Seq No:
 493675

<b>.</b>		Spike		Percent	Low	High	Duplicate	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Acenaphthene	74.0		100	74.0	56	97		
4-Chloro-3-methylphenol	87.5		100	87.5	61	108		
2-Chlorophenol	71.3		100	71.3	49	98		
1,4-Dichlorobenzene	65.1		100	65.1	39	83		
2,4-Dinitrotoluene	97.2		100	97.2	61	124		
N-Nitrosodi-N-propylamine	81.8		100	81.8	53	102		
4-Nitrophenol	39.6		100	39.6	2	75		
Pentachlorophenol	110		100	110	49	139		
Phenol	33.0		100	33.0	24	49		
Pyrene	90.1		100	90.1	42	115		
1,2,4-Trichlorobenzene	71.7		100	71.7	44	83		
Surrogates								
2,4,6-Tribromophenol	200		200	100	41	146		
2-Fluorophenol	81.9		200	41.0	30	68		
2-Fluorobiphenyl	70.5		100	70.5	47	97		
Nitrobenzene-d5	74.7		100	74.7	56	98		
Phenol-d6	58.0		200	29.0	23	44		
Terphenyl-d14	67.8		100	67.8	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 0310136-1

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

10/31/03 **Date Reported:** Work Order: 0310136

QC Type: Matrix Spike

Run ID:

Sample ID: 0310099-01BMS **Analysis Date:** 10/30/03 23:59 HP-5 031030A Prep Batch ID: 12418

Units: μg/L **Seq No:** 493678

D	<b>D</b> 1/	Spike		Percent	Low	High	Duplicate	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Acenaphthene	322	U	417	77.3	56	97		
4-Chloro-3-methylphenol	368	U	417	88.4	61	108		
2-Chlorophenol	309	U	417	74.3	49	98		
1,4-Dichlorobenzene	279	U	417	66.8	39	83		
2,4-Dinitrotoluene	407	U	417	97.6	61	124		
N-Nitrosodi-N-propylamine	343	U	417	82.4	53	102		
4-Nitrophenol	193	U	417	46.2	2	75		
Pentachlorophenol	490	U	417	118	49	139		
Phenol	184	U	417	44.3	24	49		
Pyrene	387	U	417	92.8	42	115		
1,2,4-Trichlorobenzene	304	U	417	73.0	44	83		
Surrogates								
2,4,6-Tribromophenol	846	0	833	101	41	146		
2-Fluorophenol	381	0	833	45.7	30	68		
2-Fluorobiphenyl	301	0	417	72.1	47	97		
Nitrobenzene-d5	316	0	417	76.0	56	98		
Phenol-d6	326	0	833	39.1	23	44		
Terphenyl-d14	293	0	417	70.3	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

**Report Number:** 0310136-1 **Date Reported:** 10/31/03

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

**Work Order:** 0310136

QC Type: Matrix Spike Duplicate

 Sample ID:
 0310099-01BMSD
 Analysis Date:
 10/31/03 00:29
 Units:
 μg/L

 Run ID:
 HP-5 031030A
 Prep Batch ID:
 12418
 Seq No:
 493679

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RI RPD Li	PD
i ai ametei	Result	1 ai ent	value	Recovery	Lillit	Lillit	1 al Ciit	KI D LI	ши
Acenaphthene	319	U	417	76.7	56	97	322	0.87	28
4-Chloro-3-methylphenol	364	U	417	87.3	61	108	368	1.2	37
2-Chlorophenol	304	U	417	73.0	49	98	309	1.7	29
1,4-Dichlorobenzene	266	U	417	63.9	39	83	279	4.5	32
2,4-Dinitrotoluene	405	U	417	97.3	61	124	407	0.35	22
N-Nitrosodi-N-propylamine	335	U	417	80.3	53	102	343	2.6	55
4-Nitrophenol	187	U	417	44.8	2	75	193	3.2	47
Pentachlorophenol	497	U	417	119	49	139	490	1.4	49
Phenol	165	U	417	39.6	24	49	184	11	23
Pyrene	381	U	417	91.4	42	115	387	1.4	25
1,2,4-Trichlorobenzene	291	U	417	69.7	44	83	304	4.5	28
Surrogates									
2,4,6-Tribromophenol	833	0	833	100	41	146			
2-Fluorophenol	368	0	833	44.2	30	68			
2-Fluorobiphenyl	288	0	417	69.1	47	97			
Nitrobenzene-d5	309	0	417	74.3	56	98			
Phenol-d6	288	0	833	34.6	23	44			
Terphenyl-d14	287	0	417	68.8	37	116			

 $<sup>\</sup>boldsymbol{U}$  - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11

**Report Number:** 03

0310136-1

**Project:** TEAD SWMU 11

Date Reported: Work Order:

10/31/03 0310136

QC Type: Method Blank

Project ID:

Run ID:

Sample ID: MB-12418

**Analysis Date:** 10/30/03 21:31

Units: μg/L

HP-5 031030B

Prep Batch ID: 12418

Seq No: 493680

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Benz(a)anthracene	U	0	0	0		1		
Benzo(b)fluoranthene	U	0	0	0		1		
Surrogates								
2,4,6-Tribromophenol	163	0	200	81.3	41	146		
2-Fluorophenol	70.4	0	200	35.2	30	68		
2-Fluorobiphenyl	102 S(8a)	0	100	102	47	97		
Nitrobenzene-d5	122 S(8a)	0	100	122	56	98		
Phenol-d6	50.1	0	200	25.1	23	44		
Terphenyl-d14	81.4	0	100	81.4	37	116		

8a: See sample comments.

Sample Comments: MB had slightly high surrogate recoveries which may indicate a high bias for similar compounds.

S -Results outside normal recovery limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client:North Wind Environmental, Inc.Report Number:0310136-1Project:TEAD SWMU 11Date Reported:10/31/03

Project ID: TEAD SWMU 11 Work Order: 0310136

QC Type: Laboratory Control Spike

 Sample ID:
 LCS-12418
 Analysis Date:
 10/30/03 22:01
 Units:
 μg/L

 Run ID:
 HP-5\_031030B
 Prep Batch ID:
 12418
 Seq No:
 493681

		Spike		Percent	Low	High	Duplicate	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Acenaphthene	74.0		100	74.0	56	97		
4-Chloro-3-methylphenol	87.5		100	87.5	61	108		
2-Chlorophenol	71.3		100	71.3	49	98		
1,4-Dichlorobenzene	65.1		100	65.1	39	83		
2,4-Dinitrotoluene	97.2		100	97.2	61	124		
N-Nitrosodi-N-propylamine	81.8		100	81.8	53	102		
4-Nitrophenol	39.6		100	39.6	2	75		
Pentachlorophenol	110		100	110	49	139		
Phenol	33.0		100	33.0	24	49		
Pyrene	90.1		100	90.1	42	115		
1,2,4-Trichlorobenzene	71.7		100	71.7	44	83		
Surrogates								
2,4,6-Tribromophenol	200		200	100	41	146		
2-Fluorophenol	81.9		200	41.0	30	68		
2-Fluorobiphenyl	70.5		100	70.5	47	97		
Nitrobenzene-d5	74.7		100	74.7	56	98		
Phenol-d6	58.0		200	29.0	23	44		
Terphenyl-d14	67.8		100	67.8	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 0310136-1 10/31/03 **Date Reported:** 

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

Work Order: 0310136

QC Type: Matrix Spike

Run ID:

Sample ID: 0310099-01BMS **Analysis Date:** 10/30/03 23:59 HP-5 031030B Prep Batch ID: 12418

Units: μg/L Seq No: 493687

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Acenaphthene	322	U	417	77.3	56	97		
4-Chloro-3-methylphenol	368	U	417	88.4	61	108		
2-Chlorophenol	309	U	417	74.3	49	98		
1,4-Dichlorobenzene	279	U	417	66.8	39	83		
2,4-Dinitrotoluene	407	U	417	97.6	61	124		
N-Nitrosodi-N-propylamine	343	U	417	82.4	53	102		
4-Nitrophenol	193	U	417	46.2	2	75		
Pentachlorophenol	490	U	417	118	49	139		
Phenol	184	U	417	44.3	24	49		
Pyrene	387	U	417	92.8	42	115		
1,2,4-Trichlorobenzene	304	U	417	73.0	44	83		
Surrogates								
2,4,6-Tribromophenol	846	0	833	101	41	146		
2-Fluorophenol	381	0	833	45.7	30	68		
2-Fluorobiphenyl	301	0	417	72.1	47	97		
Nitrobenzene-d5	316	0	417	76.0	56	98		
Phenol-d6	326	0	833	39.1	23	44		
Terphenyl-d14	293	0	417	70.3	37	116		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

12418

Client: North Wind Environmental, Inc.

HP-5 031030B

**Report Number:** 0310136-1

**Project:** TEAD SWMU 11 **Project ID:** TEAD SWMU 11

Sample ID:

Run ID:

**Date Reported:** 10/31/03 **Work Order:** 0310136

QC Type: Matrix Spike Duplicate

0310099-01BMSD **Analysis Date:** 10/31/03 00:29

Prep Batch ID:

**Units:** μg/L **Seq No:** 493688

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RI RPD Li	PD mit
Acenaphthene	319	U	417	76.7	56	97	322	0.87	28
4-Chloro-3-methylphenol	364	U	417	87.3	61	108	368	1.2	37
2-Chlorophenol	304	U	417	73.0	49	98	309	1.7	29
1,4-Dichlorobenzene	266	U	417	63.9	39	83	279	4.5	32
2,4-Dinitrotoluene	405	U	417	97.3	61	124	407	0.35	22
N-Nitrosodi-N-propylamine	335	U	417	80.3	53	102	343	2.6	55
4-Nitrophenol	187	U	417	44.8	2	75	193	3.2	47
Pentachlorophenol	497	U	417	119	49	139	490	1.4	49
Phenol	165	U	417	39.6	24	49	184	11	23
Pyrene	381	U	417	91.4	42	115	387	1.4	25
1,2,4-Trichlorobenzene	291	U	417	69.7	44	83	304	4.5	28
Surrogates									
2,4,6-Tribromophenol	833	0	833	100	41	146			
2-Fluorophenol	368	0	833	44.2	30	68			
2-Fluorobiphenyl	288	0	417	69.1	47	97			
Nitrobenzene-d5	309	0	417	74.3	56	98			
Phenol-d6	288	0	833	34.6	23	44			
Terphenyl-d14	287	0	417	68.8	37	116			

 $\boldsymbol{U}$  - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Report Number:

0310136-1

**Project:** TEAD SWMU 11

**Date Reported:** 

10/31/03

Project ID: TEAD SWMU 11

Work Order:

0310136

QC Type: TCLP Blank

**Sample ID:** BF-12377 **Run ID:** HP-5 031030B

**Analysis Date:** 10/31/03 01:27 **Prep Batch ID:** 12401

**Units:** μg/L **Seq No:** 493689

Prep Batch ID: Spike True Percent Low High **Duplicate** RPD **Parameter** Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit 2,4-Dinitrotoluene 0 0 0 U 20 Hexachlorobenzene U 0 0 0 3 Hexachlorobutadiene U 0 0 0 4 Hexachloroethane U 0 8

2-Methylphenol (o-Cresol)	U	0	0	0		6
3 and 4- Methylphenol (m+p cresol)	U	0	0	0		3
Nitrobenzene	U	0	0	0		3
Pentachlorophenol	U	0	0	0		30
2,4,5-Trichlorophenol	U	0	0	0		7
2,4,6-Trichlorophenol	U	0	0	0		7
Surrogates						
2,4,6-Tribromophenol	750	0	800	93.7	41	146
2-Fluorophenol	460	0	800	57.5	30	68
2-Fluorobiphenyl	241	0	400	60.2	47	97

273

293

411 S(8a)

8a: See sample comments.

Nitrobenzene-d5

Terphenyl-d14

Phenol-d6

Sample Comments: Sample has high surrogate recovery for Phenol-d6. May indicate a high bias for similar compounds.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

0

0

400

800

400

68.2

51.4

73.3

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

98

44

116

56

23

37



# North Wind, Inc.

Reference Case SOW02	-
Client No:	
SDG No:	Γ

SAMPLE No.	_			Airbill:	Name:		
MATRIXI SAMPLER	() -	Salt Lake City UT	LTC:	Mountain States Analytical	By Hand		Generic Chain or custody
EALL CONC				a Mica			
ANALYSIS/ TURNAROUND	4	ω	2	1 Hick Maine	Relinquished By	Chain of Custody Record	Custody
TAG No.! PRESERVATIVE! Bottles				~ 10/21/03 1430	(Date / Time)	lecord	
STATION LOCATION				Push Mainer 10/2/63 1430 HAMAILE OLARD 10/21/031430 Unit Price:	Received By	Sampler Chan Anthon	
SAMPLE COLLECT DATE/TIME				n 10/01/03/430	(Date / Time)	antur	
	Unit Price:	Lab Contract No:	Transfer To:	Unit Price:	Lab Contract No:	For Lab Use Only	SDG No:
FOR LAB USE ONLY Sample Condition On Receipt							Г

SAMPLE No. SAMPLER	34V1	TURNAROUND	PRESERVATIVE/ Bottles	LOCATION	DATE/TIME	Sample Condition
S11SP-03-CNF- Soil (0"-12") A1 <i>州ら州SD</i>	<u>ه</u>	SVOC 8270C (1) (Ice Only) (1)	(Ice Only) (1)	S11SP-03-CNF-A1	S: 10/21/2003 / 1053	
S11SP-03-CNF- Water A10	<b>6</b>	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A10	s: 10/21/2003 / 1000	
\$11SP-03-CNF- Soil (0"-12") A2	۵	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A2	s: 10/21/2003//055	
\$11SP-03-CNF- Soil (0"-12") A3	<u>ن</u>	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A3	s: 10/21/2003//058	
S11SP-03-CNF- Soil (0"-12") A4	<u>آ</u>	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A4	s: 10/21/2003///00	
\$11\$P-03-CNF- Soil (0"-12") A5	<u>0</u>	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A5	s: 10/21/2003 / 1/03	
\$11SP-03-CNF- Soil (0"-12") A6	<u>آ</u>	SVOC 8270C (1)	(Ice Only) (1)	S11SP-03-CNF-A6	s: 10/21/2003/1105	
\$11\$P-03-CNF- Soil (0"-12") A7	۵	SVOC 8270C (1)	(lœ Only) (1)	\$11SP-03-CNF-A7	s: 10/21/2003 / //08	
\$11SP-03-CNF- Soil (0"-12") A8	<u>،</u>	SVOC 8270C (1)	(ice Only) (1)	S11SP-03-CNF-A8	S: 10/21/2003 / ////	

Shipment for Case	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt	Chain of Custody Seal Number:	ber:
	5115P-03-CNF-A1				
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact?	Shipment Iced?
SVOC 8270C = SVOC 8270C	8270C				

TR Number:

TR Number: 8-443278439-102003-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: North Wind Inc., 454 Shoup Ave, St 200, Idaho Falls, Idaho 83402, Attn: Tom Matzen, Phone 208/528-8718

LABORATORY COFY
FX/5.1.045 Page 1 of 1

# **Mountain States Analytical, LLC**

### Sample Receipt Checklist

Client Name: Northwar Carrier: Client	nd Envi		Work Order No. Carrier Number:	0310134	<u> </u>
☐ Hand delivered, no cooler	Hand delivered, san	nple(s) taken out at receiving	g counter		
Cooler Information: Non-Rai Ludlum Model 3 Serial # Smear Results: Cooler: \( \alpha \) Transport Index (1 meter rea	Ludlum M /β <b>In</b>	lodel 2929 Scaler Serial # iner Pkg: α/β	Samples:		
/	Fair 🗅 Da No 🖸 Not Applica	ioactivity Reading (if require amaged (explain) ble O PID Reading	•	N/A- Zi Hand Delivered Charging Battery Ci Out of Service	
Custody Seals Present: Yes 2 Intact 2	No D Not Applica Broken D Seal Number	ble U er:			
Coolant: Ice Blue Ice State of Coolant: Frozen 12 Thermometer ID: 1/1/1 Reac Packing Description: Sample 16  MULLNAL.	ing:_\$ºC CF	:Corrected Te	mp: <u> </u>	Temp Blank Included: Yes 🗹	No DENT
- material	- Jenney T		2,000		
Chain-Of-Custody Informat COC Present: COC Number(s): COC signed (relinquished and received COC agrees with sample labels: Notes:	Yes Z No Yes Z No Yes Z No	Other: O O Not Applicable O Not Applicable O			
Sample Information: Samples included in cooler: S// S	P-03-CNF-A1 - 2-03-CNF-A10	- A8			
Custody Seals Present:		ot Applicable 🗆 Other eal Number(s)			<del></del>
Sample containers intact: Samples in proper containers: Sufficient sample volume: All samples received in hold time:	Yes 2r No □ _				
Water – VOA's have zero headspace: Pre-preserved with HCI:  Notes:	Pre-preserved with		on-Preserved: 🗅		
Water – pH acceptable upon receipt: Y HNO <sub>3</sub> = H <sub>2</sub> SO <sub>4</sub> =	es 🗆 Adjusted (se	ee comments below) 🛭 Zi	Not Applicable 🞾 nAC /NaOH =	HCL =	
Water - pH adjusted: (MSA Tracking HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> Na <sub>2</sub> SO <sub>2</sub> O <sub>3</sub>		<u> </u>	-	
Notes:					
Cooler Contents Inspected & Verif		乃 Time: / L	141 Revie	wed by: <u>13%</u> Date: <u>ic</u>	.21.03

# Appendix F Quality Control Summary Report

North Wind, Inc. SWMU 11 CMCR

Document ID: NW-ID-2004-019

#### Revision ID:

# **Quality Control Summary Report**

# **SWMU 11 at the Tooele Army Depot**

Prepared for: Sacramento District U.S. Army Corps of Engineers Sacramento, California Contract No. DACW05-00-D-0024, D.O. 006



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Attachment 1—Data Validation Reports

Attachment 2 – Automated Data Review System Reports

#### **Acronyms**

CAO corrective action objective

CDQMP Chemical Data Quality Management Plan

CMCR Corrective Measures Completion Report

COC chain-of-custody

DQO data quality objective

EPA Environmental Protection Agency

FTL field team leader

LCS Laboratory Control Spike

PDS Post Dilution Spike

L&V limitations and validation

MS matrix spike

MSD matrix spike duplicate

MSAI Mountain States Analytical, Inc.

QA quality assurance

QC quality control

RPD relative percent difference

SDG Sample Delivery Group

SWMU Solid Waste Management Unit

TEAD Tooele Army Depot

UDEQ Utah Department of Environmental Quality

USACE U.S. Army Corps of Engineers

### **Quality Control Summary Report**

#### 1. QUALITY CONTROL REQUIREMENTS

The work performed in remediation of Solid Waste Management Unit (SWMU) 11 was controlled by plans and procedures for both environmental sampling and analytical work. The requirements for successful completion of the work were carefully analyzed during the preparatory phase of the project. Key requirements documents included the *SWMU 11 Remedial Action Plan* (RAP; AEEC 2002), the *SWMU 11 Sampling and Analysis Plan* (SAP; AEEC 2002) and the TEAD *Chemical Data Quality Management Plan* (CDQMP; USACE 1999).

In addition to up-front identification of quality requirements, North Wind, Inc. prepared for the project by selecting qualified project personnel, conducting training as necessary, and fully briefing all members of the project on the requirements for a successful job. A substantial amount of time was expended scheduling suppliers and services to ensure the necessary tools, equipment, and support would be available to complete the work in the field. North Wind selected Mountain States Analytical, Inc. (MSAI) to analyze the confirmation samples. MSAI was certified by the State of Utah and validated by the United States Army Corps of Engineers (USACE). Prior to the start of fieldwork, North Wind issued a scope of work and technical requirements to the laboratory and tentatively scheduled delivery dates for the samples to ensure rapid turnaround. Severn-Trent Laboratories in Sacramento, California was contracted by the USACE for analysis of the quality assurance (QA) split samples.

The primary data quality objective identified in the SAP was to determine whether soils left in place, following excavation of the five SWMU 11 removal areas, have contaminant concentrations above their respective corrective action objectives (CAOs). The CDQMP also specifies criteria for data quality parameters including precision, accuracy, representativeness, comparability, completeness, and sensitivity. These parameters and specific criteria for each are summarized in Section 6.

#### 2. FIELD QUALITY CONTROL OPERATIONS

During the implementation phase, a dedicated field team leader (FTL) ensured that all work was controlled so that all quality requirements of the governing documents were met. The FTL documented all activities, measurements, and times in a dedicated logbook and kept a photographic record of the work. This documentation is included as appendices to the *Corrective Measures Completion Report* (CMCR; North Wind 2004). The specific field sampling procedures used at SWMU 11 are also described in the CMCR (North Wind 2004).

All samples were hand-delivered to MSAI by North Wind personnel under full chain of custody (COC). All samples arrived at MSAI intact and in good condition. All COC forms were properly completed and signed off. All samples were properly labeled and packaged. 100% of the planned confirmation samples were collected and submitted to the laboratory. Two QA split samples were collected and submitted to the USACE quality assurance laboratory (Severn Trent Laboratories, Sacramento). No QC split samples were submitted to the contractor laboratory (MSAI) per USACE direction.

Samples submitted for semivolatile organic compound (SVOC) analysis required preservation by chilling to  $4^{\circ}$  C. However, sample temperatures as measured by the laboratory at time of receipt were  $8^{\circ}$  and  $10^{\circ}$  C for the two SVOC sample shipments. The laboratory noted that the ice was still frozen,

indicating that the samples were still cooling. It should also be noted that the samples were received at the laboratory approximately three hours after the samples were collected, which is not enough time to chill soil samples with wet ice under typical field conditions.

#### 3. LABORATORY QUALITY CONTROL OPERATIONS

All samples were analyzed using EPA approved methods (EPA 1996a, b). For both metals and SVOC analyses, initial and continuing calibrations, and calibration verifications, were carried out per the method. Post digestion spike recoveries were within limits. Interference check sample criteria were met. Serial dilution results were within acceptance limits. Laboratory quality control (QC) samples included method blanks, sample duplicates, matrix spikes (MSs), matrix spike duplicates (MSDs), and laboratory control spikes. All laboratory QC samples were within required control limits.

# 4. SUMMARY OF THE PRECISION, ACCURACY, REPRESENTATIVENESS, COMPLETENESS AND COMPARABILITY OF LABORATORY DATA

In accordance with the CDQMP (USACE 1999), the following parameters are to be used for assessing the quality of the measurement data: precision, accuracy, representativeness, completeness and comparability. From an evaluation of these parameters and comparison to criteria provided in the CDQMP, it has been demonstrated that the data are sufficiently accurate and consistent to resolve project Data Quality Objectives (DQOs). A summary of the individual parameters and how the SWMU 11 data met the requirements is provided below.

Table 1 provides the evaluation method and the results for the metals results. Only solid sample results are provided. Two QC runs were reported for sample delivery group 0310117, due to the number of samples in that group. QC results, including laboratory control spikes (LCS), MSs, and MSDs for SVOC compounds were also within CDQMP ranges. These data are not provided in Table 1 due to the number of compounds, but can be found in the analytical reports in Appendix E of the CMCR (North Wind 2004).

Table 1. Summary of PARCC parameter evaluation for SWMU 11 solid samples for metals sample delivery groups.

Parameter	Evaluation Method <sup>a</sup>		Results (%)			Met	
		SDG# 03	310117 <sup>b</sup> SDG# 0310129		Limit (%)	Limits?	
Precision – MS/MSD	$RPD = \frac{ X_1 - X_2 }{(X_1 + X_2/2)} \times 100\%$	As = 18 $Pb = 16$	As = 18 $Pb = 17$	As = 4 $Pb = 0$	35	Yes	
Precision – Lab Duplicates	$RPD = \frac{ X_1 - X_2 }{(X_1 + X_2/2)} x100\%$	As = 2.6 Pb = 6.2	NC <sup>c</sup>	As = NA $Pb = 18$	35	Yes	
Accuracy – Laboratory Control Spike	$\% R = \frac{MSx}{Sp} x100$	As = 96.8 Pb = 90.2	As = 95.4 Pb = 93.8	As = 93 Pb = 94.2	80-120	Yes	
Accuracy – MS	$\%R = \frac{MSx - Sx}{Sp} x100$	As = 98.9 Pb = 88	As = 97.7 Pb = 90.9	As = 104 Pb = 92.6	75-125	Yes	
Accuracy – MSD	$\%R = \frac{MSx - Sx}{Sp} x100$	As = 82.9 Pb = 75.7	As = 82 Pb = 77.7	As = 101 Pb = 93.1	75-125	Yes	

Parameter	Evaluation Method <sup>a</sup>	Results (%)  SDG# 0310117 <sup>b</sup> SDG# 0310129		Control	Met	
					Limit (%)	Limits?
Accuracy – Post Dilution Spike	$\%R = \frac{MSx - Sx}{Sp} x100$	As = 103 Pb = 90.7	As = 100 Pb = 92.8	As = 111 Pb = 97.8	75-125	Yes
Representativeness	Qualitative parameter. The sampling	g design specified	l by USACE wa	s implemented w	ithout deviation.	
Completeness	$C\% = \frac{S}{R}(100\%)$	100		100	90	Yes
Comparability	Qualitative parameter. As required by the Corrective Measures Work Plan (USACE, 2003), standardized field procedures, established and approved analytical methods, consistent reporting conventions, and standard reference materials were used to ensure data comparability.					

- a. Descriptions of the evaluation methods are available in the CDQPM (USACE 1999).
- b. Sample Delivery Group 0310117 had two QC sample evaluations.
- c. NC = value not calculated if one or more parameter results were below method detection limit.

SDG = Sample Delivery Group; As = arsenic; Pb = lead

#### 5. DATA VALIDATION ACTIVITIES

Analytical Quality Solutions performed Level III validation of all metals and SVOC analytical results. In addition, Level IV validation was performed for 10% of the samples. The validation determined that all data packages are suitable for use. There were no identified data quality issues. Attachment 1 provides the data validation worksheets.

# 6. SUMMARY OF OUTLYING OBSERVATIONS AND IMPACT TO DATA QUALITY OBJECTIVES

There are no outlying sample results. All quality control sample results were within range as required by the CDQMP (USACE 1999).

#### 7. RECOMMENDATIONS FOR DATA USE

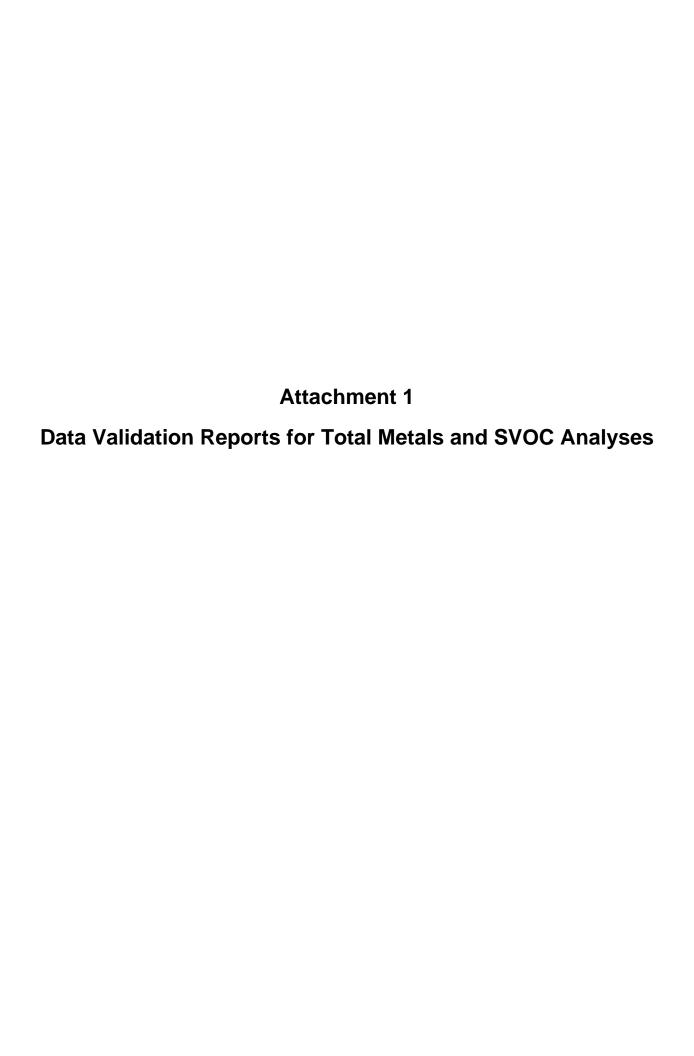
These data are considered usable for resolving project DQOs. That is, the data are adequate to conclude that the residual contaminant concentrations do not exceed CAOs.

#### 8. ELECTRONIC DATA ARCHIVAL

The SWMU 11 confirmation sample data, including both field data and chemistry data, have been archived in the USACE Automated Data Review (ADR) system, currently maintained by Synectics in Sacramento, California. The ADR reports for each sample delivery group are provided in Attachment 2.

#### 9. REFERENCES

- American Environmental and Engineering Consultants, LC., (AEEC), 2002, Final Remedial Action Plan, SWMU 11, Laundry Effluent Pond and Waste Pile Areas, December.
- EPA, 1996a, "Inductively Coupled Plasma-Atomic Emission Spectrometry," EPA SW-846 Method 6010B, Revision 2, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- EPA, 1996b, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS): Capillary column Technique," EPA SW-846 Method 8270C, Revision 3, U.S. Environmental Protection Agency, Office of Solid Waste, December 1996.
- North Wind, 2004, Draft Corrective Measures Completion Report For The Corrective Measures implementation at Solid Waste Management Unit 11, Laundry Efflue3nt Pond and Waste Pile Areas, February 2004.
- USACE, 1999, *Chemical Data Quality Management Plan*, Tooele Army Depot, Utah, SIOTE-CO-EO, Revision 2, United States Army Corps of Engineers, June 1999.



#### DATA VALIDATION SUMMARY SWMU11 Data Validation

Package ID NWE-016

Page 1 of 3

#### **`DATA PACKAGE INFORMATION**

Client: North Wind Environmental,

Inc.

Project: SWMU11 Data Validation

Data Package ID: **NWE-016**Analysis: **Metals by ICP** 

Matrix: Soil

Preparation Method: SW-846 Method 3050B Analysis Method: SW-846 Method 6010B Laboratory: Mountain States Analytical,

Inc.

Project QAP: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation guideline: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation level: III

Validator: Gloria Beilke
Date Received: December 15, 2003
Date Completed: December 20, 2003

Peer Reviewer: Date Reviewed:

	Data Package Inventory					
Ru	n Information	QC	C Summaries			
X	Final Reports	X	Blank			
X	COCs	X	LCS			
X	Cal. Summary	X	MS/MSD			
X	Cal. Raw Data	X	Sample Duplicates			
X	Run Summary		Surrogates			
X	Run Raw Data		Internal Stds. (GC)			
X	Sample Prep Logs		Tune (GC/MS)			
		X	Interfer Chks (ICP)			
			PDS (Metals)			

Comments: The data submitted are suitable for use, without qualifiers.

#### SAMPLE INFORMATION

(including duplicate, reanalysis, or dilution samples)

			Sample	Prep	Analysis	Prep	Analysis	Total
	Sample ID	Lab Number	Date	Date	Date	Days	Days	Days
1	S11WP1-03-CNF-A1	0310129-02	10/20/2003	10/22/2003	10/23/2003	2	1	3
2	S11WP1-03-CNF-A2	0310129-03	10/20/2003	10/22/2003	10/23/2003	2	1	3
3	S11WP1-03-CNF-A3	0310129-04	10/20/2003	10/22/2003	10/23/2003	2	1	3
4	S11WP1-03-CNF-A4	0310129-05	10/20/2003	10/22/2003	10/23/2003	2	1	3
5	S11WP1-03-CNF-A5	0310129-06	10/20/2003	10/22/2003	10/23/2003	2	1	3
6	S11WP1-03-CNF-A6	0310129-07	10/20/2003	10/22/2003	10/23/2003	2	1	3
7	S11WP1-03-CNF-A7	0310129-08	10/20/2003	10/22/2003	10/23/2003	2	1	3
8	S11WP1-03-CNF-A8	0310129-09	10/20/2003	10/22/2003	10/23/2003	2	1	3
	S11WP1-03-CNF-A1	0310129-02						
9	MS	MS	10/20/2003	10/22/2003	10/23/2003	2	1	3
	S11WP1-03-CNF-A1	0310129-02						
10	MSD	MSD	10/20/2003	10/22/2003	10/23/2003	2	1	3
11								
12								

### DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-016

Page 2 of 3

#### **SUMMARY OF FINDINGS**

Item	Requirements	Acceptable?	Action Recommended?	Comments
GENERAL QC	1	<u> </u>	<u> </u>	<u>'</u>
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client.
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method- specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r <sup>2</sup> , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	Y		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		

#### DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-016

Page 3 of 3

Item	Requirements	Acceptable?	Action Recommended?	Comments
FIELD QC	1	1	1	
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	N/A		Not Requested.
Overall Assessment	The data is suitable for use, without qualif	iers.		
Of Data				

#### RECOMMENDED ACTIONS

Sample ID	Parameter/Method	Analyte(s)	QC Problem	<b>Recommended Action</b>
N/A	N/A	N/A	N/A	N/A

#### Validation Flags

- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

#### DATA VALIDATION SUMMARY SWMU11 Data Validation

Package ID NWE-015 Page 1 of 3

#### DATA PACKAGE INFORMATION

Client: North Wind Environmental,

Inc.

Project: SWMU11 Data Validation

Data Package ID: **NWE-015**Analysis: **Metals by ICP** 

Matrix: Soil

Preparation Method: SW-846 Method 3050B Analysis Method: SW-846 Method 6010B Laboratory: Mountain States Analytical,

Inc.

Project QAP: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation guideline: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation level: IV

Validator: Gloria Beilke
Date Received: December 15, 2003
Date Completed: December 20, 2003

Peer Reviewer: Date Reviewed:

	Data Package Inventory						
Ru	n Information	QC	Summaries				
X	Final Reports	X	Blank				
X	COCs	X	LCS				
X	Cal. Summary	X	MS/MSD				
X	Cal. Raw Data	X	Sample Duplicates				
X	Run Summary		Surrogates				
X	Run Raw Data		Internal Stds. (GC)				
X	Sample Prep Logs		Tune (GC/MS)				
		X	Interfer Chks (ICP)				
			PDS (Metals)				

Comments: The data submitted are suitable for use, without qualifiers.

#### **SAMPLE INFORMATION**

(including duplicate, reanalysis, or dilution samples)

			Sample	Prep	Analysis	Prep	Analysis	Total
	Sample ID	Lab Number	Date	Date	Date	Days	Days	Days
1	S11WP2-03-CNF-A1	0310117-08	10/17/2003	10/20/2003	10/21/2003	3	1	4
2	S11WP2-03-CNF-A2	0310117-09	10/17/2003	10/20/2003	10/21/2003	3	1	4
3	S11WP2-03-CNF-A3	0310117-10	10/17/2003	10/20/2003	10/21/2003	3	1	4
4	S11WP2-03-CNF-A4	0310117-11	10/17/2003	10/20/2003	10/21/2003	3	1	4
5	S11WP2-03-CNF-A5	0310117-12	10/17/2003	10/20/2003	10/21/2003	3	1	4
6	S11WP2-03-CNF-A6	0310117-13	10/17/2003	10/20/2003	10/21/2003	3	1	4
7	S11WP2-03-CNF-A7	0310117-14	10/17/2003	10/20/2003	10/21/2003	3	1	4
8	S11WP2-03-CNF-A8	0310117-15	10/17/2003	10/20/2003	10/21/2003	3	1	4
9	S11WP3-03-CNF-A1	0310117-16	10/17/2003	10/20/2003	10/21/2003	3	1	4
10	S11WP3-03-CNF-A2	0310117-17	10/17/2003	10/20/2003	10/21/2003	3	1	4
11	S11WP3-03-CNF-A3	0310117-18	10/17/2003	10/20/2003	10/21/2003	3	1	4
12	S11WP3-03-CNF-A4	0310117-19	10/17/2003	10/20/2003	10/21/2003	3	1	4
13	S11WP3-03-CNF-A5	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
	S11WP2-03-CNF-A1							
14	MS	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
	S11WP2-03-CNF-A1							
15	MSD	0310117-20	10/17/2003	10/20/2003	10/21/2003	3	1	4
16								

### DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-015

Page 2 of 3

#### SUMMARY OF FINDINGS

Item	Requirements	Acceptable?	Action Recommended?	Comments
GENERAL QC	1	<u> </u>	<u> </u>	<u>'</u>
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client.
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method- specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r <sup>2</sup> , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate. Matrix interference confirmed, if necessary.	Y		
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	Y		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		

#### **DATA VALIDATION SUMMARY**

#### SWMU11 Data Validation Package ID NWE-015

Page 3 of 3

Item	Requirements	Acceptable?	Action Recommended?	Comments
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	Y		
Overall Assessment	The data is suitable for use, without qualif	iers.		
Of Data	quunt			

#### RECOMMENDED ACTIONS

Sample ID	Parameter/Method	Analyte(s)	QC Problem	<b>Recommended Action</b>
N/A	N/A	N/A	N/A	N/A

#### Validation Flags

- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



### **REVISED**

#### DATA VALIDATION SUMMARY

#### **SWMU11 Data Validation** Package ID NWE-017

Page 1 of 3

#### **DATA PACKAGE INFORMATION**

Client: North Wind Environmental,

Inc.

Project: **SWMU11 Data Validation** 

Data Package ID: **NWE-017** 

Analysis: Semivolatile Organic

Compounds by GC/MS

Matrix: Soil

SW-846 Method 3550B Preparation Method: Analysis Method: SW-846 Method 8270C Laboratory: Mountain States Analytical,

Inc.

Project QAP: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation guideline: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation level:

Date Received: December 15, 2003

Validator: Gloria Beilke

Date Revised: April 19, 2004 Peer Reviewer: Joel Workman

Date Reviewed:

	Data Package Inventory						
Ru	n Information	QC	Summaries				
X	Final Reports	X	Method Blank				
X	COCs	X	LCS				
X	Cal. Summary	X	MS/MSD				
X	Cal. Raw Data		Sample Duplicates				
X	Run Summary	X	Surrogates				
X	Run Raw Data	X	Internal Stds. (GC)				
X	Sample Prep Logs	X	Tune (GC/MS)				
			Interfer Chks (ICP)				
			PDS (Metals)				

Comments: The data submitted are suitable for

use.

#### April 19, 2004

#### **SAMPLE INFORMATION**

(including duplicate, reanalysis, or dilution samples)

			Sample	Prep	Analysis	Prep	Analysis	Total
	Sample ID	Lab Number	Date	Date	Date	Days	Days	Days
1	S11SP-03-CNF-A1	0310117-01	10/21/2003	10/21/2003	10/22/2003	0	1	1
2	S11SP-03-CNF-A2	0310117-02	10/21/2003	10/21/2003	10/22/2003	0	1	1
3	S11SP-03-CNF-A3	0310117-03	10/21/2003	10/21/2003	10/22/2003	0	1	1
4	S11SP-03-CNF-A4	0310117-04	10/21/2003	10/21/2003	10/22/2003	0	1	1
5	S11SP-03-CNF-A5	0310117-05	10/21/2003	10/21/2003	10/22/2003	0	1	1
6	S11SP-03-CNF-A6	0310117-06	10/21/2003	10/21/2003	10/22/2003	0	1	1
7	S11SP-03-CNF-A7	0310117-07	10/21/2003	10/21/2003	10/22/2003	0	1	1
	S11SP-03-CNF-A1	0310117-01						
8	MS	MS	10/21/2003	10/21/2003	10/22/2003	0	1	1
	S11SP-03-CNF-A1	0310117-01						
9	MSD	MSD	10/21/2003	10/21/2003	10/22/2003	0	1	1
10								
11						_		_



# REVISED DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-017

Page 2 of 3

#### **SUMMARY OF FINDINGS**

SUMMARY OF FINI	DINGS			
Item	Requirements	Acceptable?	Action Recommended	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client. The sample temperature was 8°C when received by the laboratory.  As per Section 2.3.3 of the CDQMP, "Samples collected and delivered to a laboratory within four hours of collection will be exempted from temperature requirement as long as the samples were handled in accordance with the specified procedures."
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method- specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC			1	
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r <sup>2</sup> , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Method Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate.  Matrix interference confirmed, if necessary.	Y		



# REVISED DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-017

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Requirements	Acceptable?	Action Recommended ?	Comments
•	•		
Performed at required frequency. Recoveries within method/project limits.	Y		
Performed at required frequency. Recoveries within method/project limits.	Y		
Performed at required frequency. Results within method/project limits.	N/A		
Performed at required frequency. Recoveries within method/project limits.	N/A		
Performed at required frequency. Recoveries within method/project limits.	Y		
Positive GC results confirmed using a second column or second detector, if necessary	N/A		
Performed at required frequency. Recoveries within method/project limits.	N/A		
Performed at required frequency. Recoveries within method/project limits.	N/A		
Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	N/A		Not Requested.
	thin acc	eptable	limits. The data is suitable for
	method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Results within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Positive GC results confirmed using a second column or second detector, if necessary  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Results within method/project limits.  Performed at required frequency. Results within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Positive GC results confirmed using a second column or second detector, if necessary  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  N/A  Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).  Degradation breakdown recoveries are within acceptable prepolegory.	Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Results within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Performed at required frequency. Recoveries within method/project limits.  Positive GC results confirmed using a second column or second detector, if necessary  Performed at required frequency. Recoveries within method/project limits.  N/A  Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).  Degradation breakdown recoveries are within acceptable

#### RECOMMENDED ACTIONS

Sample ID	Parameter/ Method	Analyte(s)	QC Problem	Recommended Action	
N/A	N/A	N/A	N/A	N/A	

#### Validation Flags

- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



### REVISED

#### DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-015

Page 1 of 3

#### **DATA PACKAGE INFORMATION**

Client: North Wind Environmental,

Inc.

Project: SWMU11 Data Validation

Data Package ID: **NWE-015** 

Analysis: Semivolatile Organic

Compounds by GC/MS

Matrix: Soil

Preparation Method: SW-846 Method 3550B Analysis Method: SW-846 Method 8270C Laboratory: Mountain States Analytical,

Inc.

Project QAP: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot Revision 2 June 1999

Validation guideline: Chemical Data Quality

Management Plan (CDQMP)

Tooele Army Depot

Revision 2 June 1999

Validation level: IV

Date Received: December 15, 2003

Validator: Gloria Beilke Date Revised: April 19, 2004

Peer Reviewer: Joel Workman

Date Reviewed: April 19, 2004

	Data Package Inventory							
Ru	n Information	QC	Summaries					
X	Final Reports	X	Method Blank					
X	COCs	X	LCS					
X	Cal. Summary	X	MS/MSD					
X	Cal. Raw Data		Sample Duplicates					
X	Run Summary	X	Surrogates					
X	Run Raw Data	X	Internal Stds. (GC)					
X	Sample Prep Logs	X	Tune (GC/MS)					
			Interfer Chks (ICP)					
			PDS (Metals)					

Comments: The data submitted are suitable for

use.

#### **SAMPLE INFORMATION**

(including duplicate, reanalysis, or dilution samples)

			Sample	Prep	Analysis	Prep	Analysis	Total
	Sample ID	Lab Number	Date	Date	Date	Days	Days	Days
1	S11LP-03-CNF-A1	0310117-01	10/17/2003	10/20/2003	10/20/2003	3	0	3
2	S11LP-03-CNF-A2	0310117-02	10/17/2003	10/20/2003	10/20/2003	3	0	3
3	S11LP-03-CNF-A3	0310117-03	10/17/2003	10/20/2003	10/20/2003	3	0	3
4	S11LP-03-CNF-A4	0310117-04	10/17/2003	10/20/2003	10/20/2003	3	0	3
5	S11LP-03-CNF-A5	0310117-05	10/17/2003	10/20/2003	10/20/2003	3	0	3
6	S11LP-03-CNF-A6	0310117-06	10/17/2003	10/20/2003	10/20/2003	3	0	3
7	S11LP-03-CNF-A7	0310117-07	10/17/2003	10/20/2003	10/20/2003	3	0	3
	S11LP-03-CNF-A1	0310117-01						
8	MS	MS	10/17/2003	10/20/2003	10/20/2003	3	0	3
	S11LP-03-CNF-A1	0310117-01						
9	MSD	MSD	10/17/2003	10/20/2003	10/20/2003	3	0	3
10								
11								



# REVISED DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-015

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#### **SUMMARY OF FINDINGS**

SUMMARY OF FINI	DINGS		1	
Item	Requirements	Acceptable?	Action Recommended	Comments
GENERAL QC				
Chain-of-custody	COC and receiving documents properly completed (analytes, method, signatures, etc.)	Y		
Sample Receipt	Samples received in good condition, on ice, with receiving documentation, etc.	Y	N	The cooler was not sealed. The cooler was hand delivered to the laboratory by the client. The sample temperature was 10°C when received by the laboratory.  As per Section 2.3.3 of the CDQMP, "Samples collected and delivered to a laboratory within four hours of collection will be exempted from temperature requirement as long as the samples were handled in accordance with the specified procedures."
Preservatives	Evidence that the samples were correctly preserved.	Y		
Holding Times	Samples analyzed and prepared within method- specified time limits.	Y		
Final Reports	Final reports include all required information such as preparation & analytical methods, preparation & analytical dates, corrected MDLs, signatures, etc.	Y		
Analyte List	Analytes reported consistent with the COC and project requirements.	Y		
Reporting Limits	Reported detection limits low enough for project requirements.	Y		
Analyte / RL Quantitation	Sample preparation and dilution factors correctly accounted for in the final result and RL.	Y		
BATCH/RUN QC				
Initial Calibration	Meets method-specified requirements for frequency of calibration, number of standards, r <sup>2</sup> , etc.	Y		
Continuing Calibration	Performed at required frequency. Recoveries within method/project limits.	Y		
Method Blanks	Performed at required frequency. Recoveries within method/project limits.	Y		
Laboratory Control Samples	Performed at required frequency. Recoveries within method/project limits.	Y		
Matrix Spike/ Matrix Spike Duplicates	Performed at required frequency. Recoveries within method/project limits. Spiking levels adequate.  Matrix interference confirmed, if necessary.	Y		



# REVISED DATA VALIDATION SUMMARY

#### SWMU11 Data Validation Package ID NWE-015

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Item	Requirements	Acceptable?	Action Recommended ?	Comments
METHOD QC				
Surrogates (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Internal Standards (GC, ICP/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Interference Checks (ICP)	Performed at required frequency. Results within method/project limits.	N/A		
Post Digestion Spike (Metals)	Performed at required frequency. Recoveries within method/project limits.	N/A		
Target Compound Identification (GC, GC/MS)	Performed at required frequency. Recoveries within method/project limits.	Y		
Analyte Confirmation (GC)	Positive GC results confirmed using a second column or second detector, if necessary	N/A		
FIELD QC				
Field Blanks	Performed at required frequency. Recoveries within method/project limits.	N/A		
Field Duplicates	Performed at required frequency. Recoveries within method/project limits.	N/A		
OTHER QC				
Level IV Checks	Transcriptions and calculations correctly performed. (verify at least 10% using extraction logs, sample prep logs, standard prep logs, etc.). Laboratory certification and performance acceptable (verify using lab certifications and audit records, MDL studies, analyst performance studies, etc.).	Y		
Overall Assessment Of Data	Degradation breakdown recoveries are wi	thin acc	eptable l	limits. The data is suitable for

#### RECOMMENDED ACTIONS

Sample ID	Parameter/ Method	Analyte(s)	QC Problem	Recommended Action	
N/A	N/A	N/A	N/A	N/A	

#### Validation Flags

- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# Attachment 2 Automated Data Review System Reports

#### **AUTOMATED DATA REVIEW SUMMARY**

Facility: SWMU 11
Event: SWMU 11

**Contract:** 9T9H213C 9T9H213C

Sample Delivery Group: 0310117

Field Contractor: North Wind Environmental, Inc., Idaho Falls, ID

Laboratory Contractor: Mountain States Analytical, Salt Lake City, UT

Data Review Contractor: Synectics, Sacramento, CA

Guidance Document: Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele

Army depot, Tooele, Utah, 7/21/03

Analytical Method Normal Samples Field QC Samples
SW6010B 13 SW8270C 7 -

ISSS-539-01 1/3 May 21,2004 12:40 pm

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistant with the requirements contained in Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as "J/UJ", the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by North Wind Environmental, Inc., Idaho Falls, ID; analyses were performed by Mountain States Analytical, Salt Lake City, UT and were reported under sample delivery group (SDG) 0310117. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative. The following quality control elements were evaluated during this review effort:

Technical Holding Times
Continuing Calibration Verification
Method Blank Contamination
Field Blank Contamination
Blank Spike Accuracy
Blank Spike Precision
Matrix Spike Accuracy
Matrix Spike Precision
Surrogate Recovery
Laboratory Duplicate Precision
Field Duplicate Precision

A minimum of ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following reports were generated during the evaluation of this data set and are presented as attachments to this report as applicable.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outlier Report.

Field Duplicate – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the ADR narrative.

ISSS-539-01 2/3 May 21,2004 12:40 pm

Out of control events experienced by the laboratory have and the rejection of 0 % ( 0 results) of the data set. attachments, and discussed in the ADR narrative, when	These deficiencies are detailed in the referenced
Released by	Date

ISSS-539-01 3/3 May 21,2004 12:40 pm

## **Batch Report**

Facility: SWMU 11
Lab: MSSL
Filename: 0310117

Status: **Certified - 12/18/2003** 

User: DennisLeeke

Test Method: SW6010B
Prep Method: TOTAL
Leach Method: NONE

Test Batch	Prep Batch	Leach Batch	<u>Location</u>	Matrix	Field Sample ID	Lab Sample ID	Test Date and Time Sample Type
39520	12381	NA	LABQC	SQ		PBW12381	10/21/2003 11:15:00AM LB2
	12381	NA	LABQC	SQ		LCSW12381	10/21/2003 11:19:00AM BS2
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	0310117-08A	10/21/2003 11:23:00AM N1
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	031011708AMS	10/21/2003 11:30:00AM MS1
	12381	NA	SWMU11-CS-13	SO	S11WP2-03-CNF-A1	031011708AMS	10/21/2003 11:33:00AM SD1
	12381	NA	SWMU11-CS-14	SO	S11WP2-03-CNF-A2	0310117-09A	10/21/2003 12:07:00PM N1
	12381	NA	SWMU11-CS-15	SO	S11WP2-03-CNF-A3	0310117-10A	10/21/2003 12:12:00PM N1
	12381	NA	SWMU11-CS-16	so	S11WP2-03-CNF-A4	0310117-11A	10/21/2003 12:16:00PM N1
	12381	NA	SWMU11-CS-17	so	S11WP2-03-CNF-A5	0310117-12A	10/21/2003 12:20:00PM N1
	12381	NA	SWMU11-CS-18	SO	S11WP2-03-CNF-A6	0310117-13A	10/21/2003 12:25:00PM N1
	12381	NA	SWMU11-CS-19	SO	S11WP2-03-CNF-A7	0310117-14A	10/21/2003 12:29:00PM N1
	12381	NA	SWMU11-CS-20	SO	S11WP2-03-CNF-A8	0310117-15A	10/21/2003 12:33:00PM N1
	12381	NA	SWMU11-CS-08	SO	S11WP3-03-CNF-A1	0310117-16A	10/21/2003 12:38:00PM N1
	12381	NA	SWMU11-CS-09	SO	S11WP3-03-CNF-A2	0310117-17A	10/21/2003 12:51:00PM N1
	12381	NA	SWMU11-CS-10	SO	S11WP3-03-CNF-A3	0310117-18A	10/21/2003 12:55:00PM N1
	12381	NA	SWMU11-CS-11	so	S11WP3-03-CNF-A4	0310117-19A	10/21/2003 12:59:00PM N1
	12381	NA	SWMU11-CS-12	so	S11WP3-03-CNF-A5	0310117-20A	10/21/2003 1:04:00PM N1

May 21, 2004 12:41:58PM batch.rpt v1.2.34

## **Batch Report**

Facility: SWMU 11
Lab: MSSL
Filename: 0310117

Status: **Certified - 12/18/2003** 

User: DennisLeeke

Test Method: SW8270C
Prep Method: SW3550
Leach Method: NONE

Test Batch	Prep Batch	Leach Batch	Location	<u>Matrix</u>	Field Sample ID	Lab Sample ID	Test Date and Time Sample Type
39505	12380	NA	LABQC	SQ		MB12380	10/20/2003 6:33:00PM LB2
	12380	NA	LABQC	SQ		LCS12380	10/20/2003 7:04:00PM BS2
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	0310117-01A	10/20/2003 8:35:00PM N1
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	031011701AMS	10/20/2003 9:06:00PM MS1
	12380	NA	SWMU11-CS-01	SO	S11LP-03-CNF-A1	031011701AMS	10/20/2003 9:37:00PM SD1
	12380	NA	SWMU11-CS-02	SO	S11LP-03-CNF-A2	0310117-02A	10/20/2003 10:08:00PM N1
	12380	NA	SWMU11-CS-03	SO	S11LP-03-CNF-A3	0310117-03A	10/20/2003 10:39:00PM N1
	12380	NA	SWMU11-CS-04	SO	S11LP-03-CNF-A4	0310117-04A	10/20/2003 11:10:00PM N1
	12380	NA	SWMU11-CS-05	SO	S11LP-03-CNF-A5	0310117-05A	10/20/2003 11:41:00PM N1
	12380	NA	SWMU11-CS-06	SO	S11LP-03-CNF-A6	0310117-06A	10/21/2003 12:12:00AM N1
	12380	NA	SWMU11-CS-07	SO	S11LP-03-CNF-A7	0310117-07A	10/21/2003 12:43:00AM N1

May 21, 2004 12:41:58PM batch.rpt v1.2.34

## **Detected Results**

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310117

#### Trace Metals by ICP

Test/Leach	Matrix	Field Sample ID	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	Lab Result	Qualified Result	<u>Units</u>	Reason
SW6010B/NONE	SO	S11WP2-03-CNF-A1	Ν	Arsenic	7.9	4.2	<b>4.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A1	N	Lead	7.9	2.4	<b>2.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	N	Arsenic	8.1	6.4	<b>6.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	N	Lead	8.1	28	28	MG/KG	
SW6010B/NONE	SO	S11WP2-03-CNF-A3	Ν	Arsenic	8.1	3.4	<b>3.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	Ν	Lead	8.1	2.6	<b>2.6</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	Ν	Arsenic	8.3	5.5	<b>5.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	Ν	Lead	8.3	7.1	<b>7.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	Ν	Arsenic	7.9	4.0	<b>4.0</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	Ν	Lead	7.9	2.7	<b>2.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	Ν	Arsenic	7.9	6.8	<b>6.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	Ν	Lead	7.9	10	10	MG/KG	
SW6010B/NONE	SO	S11WP2-03-CNF-A7	Ν	Arsenic	7.9	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	Ν	Lead	7.9	2.3	<b>2.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	Ν	Arsenic	7.8	4.5	<b>4.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	Ν	Lead	7.8	2.2	<b>2.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	Ν	Arsenic	8.0	5.9	<b>5.9</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	Ν	Lead	8.0	3.3	<b>3.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	Ν	Arsenic	7.8	4.6	<b>4.6</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	Ν	Lead	7.8	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	Ν	Arsenic	7.7	3.3	<b>3.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	Ν	Lead	7.7	4.0	<b>4.0</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	Ν	Arsenic	7.5	4.5	<b>4.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Lead	7.5	2.5	<b>2.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Arsenic	7.9	5.2	5.2 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Lead	7.9	3.1	<b>3.1</b> J	MG/KG	TR

May 21,2004 12:42:40PM result.rpt v1.2.53

#### SDG: 0310117

#### Semivolatile Organic Compounds by Capillary GC/MS

Test/Leach	Matrix	Field Sample ID	Type	<u>Analyte</u>	<u>RL</u>	Lab Result	Qualified Result	<u>Units</u>	Reason
SW8270C/NONE	SO	S11LP-03-CNF-A1	Ν	bis(2-Ethylhexyl) Phthalate	350	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A2	Ν	bis(2-Ethylhexyl) Phthalate	380	470	470	UG/KG	
SW8270C/NONE	SO	S11LP-03-CNF-A3	Ν	bis(2-Ethylhexyl) Phthalate	350	140	140 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A4	Ν	bis(2-Ethylhexyl) Phthalate	370	590	590	UG/KG	
SW8270C/NONE	SO	S11LP-03-CNF-A5	Ν	bis(2-Ethylhexyl) Phthalate	370	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A7	Ν	bis(2-Ethylhexyl) Phthalate	1,800	2,500	2,500	UG/KG	

May 21,2004 12:42:40PM result.rpt v1.2.53 2 of 2

## **Qualified Results**

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310117

#### Trace Metals by ICP

Test/Leach	Matrix	Field Sample ID	<u>Type</u>	<u>Analyte</u>	<u>RL</u>	Lab Result	Qualified Result	<u>Units</u>	Reason
SW6010B/NONE	SO	S11WP2-03-CNF-A1	Ν	Arsenic	7.9	4.2	<b>4.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A1	Ν	Lead	7.9	2.4	<b>2.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A2	Ν	Arsenic	8.1	6.4	<b>6.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Arsenic	8.1	3.4	<b>3.4</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A3	N	Lead	8.1	2.6	<b>2.6</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	Ν	Arsenic	8.3	5.5	<b>5.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A4	N	Lead	8.3	7.1	<b>7.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	Ν	Arsenic	7.9	4.0	<b>4.0</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A5	Ν	Lead	7.9	2.7	<b>2.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A6	Ν	Arsenic	7.9	6.8	<b>6.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Arsenic	7.9	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A7	N	Lead	7.9	2.3	<b>2.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Arsenic	7.8	4.5	<b>4.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP2-03-CNF-A8	N	Lead	7.8	2.2	<b>2.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Arsenic	8.0	5.9	5.9 J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A1	N	Lead	8.0	3.3	<b>3.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Arsenic	7.8	4.6	<b>4.6</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A2	N	Lead	7.8	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Arsenic	7.7	3.3	<b>3.3</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A3	N	Lead	7.7	4.0	<b>4.0</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Arsenic	7.5	4.5	<b>4.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A4	N	Lead	7.5	2.5	<b>2.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Arsenic	7.9	5.2	<b>5.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP3-03-CNF-A5	N	Lead	7.9	3.1	<b>3.1</b> J	MG/KG	TR

May 21,2004 12:43:36PM result.rpt v1.2.53

#### SDG: 0310117

### Semivolatile Organic Compounds by Capillary GC/MS

Test/Leach	Matrix	Field Sample ID	Type	<u>Analyte</u>	<u>RL</u>	Lab Result	Qualified Result	<u>Units</u>	Reason
SW8270C/NONE	SO	S11LP-03-CNF-A1	Ν	bis(2-Ethylhexyl) Phthalate	350	120	120 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A3	Ν	bis(2-Ethylhexyl) Phthalate	350	140	140 J	UG/KG	TR
SW8270C/NONE	SO	S11LP-03-CNF-A5	Ν	bis(2-Ethylhexyl) Phthalate	370	120	120 J	UG/KG	TR

May 21,2004 12:43:36PM result.rpt v1.2.53 2 of 2

#### **AUTOMATED DATA REVIEW SUMMARY**

Facility: SWMU 11
Event: SWMU 11

**Contract:** 9T9H213C 9T9H213C

Sample Delivery Group: 0310129

Field Contractor: North Wind Environmental, Inc., Idaho Falls, ID

Laboratory Contractor: Mountain States Analytical, Salt Lake City, UT

Data Review Contractor: Synectics, Sacramento, CA

Guidance Document: Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele

Army depot, Tooele, Utah, 7/21/03

Analytical Method Normal Samples Field QC Samples

SW6010B 8 -

ISSS-539-01 1/3 May 21,2004 12:46 pm

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistant with the requirements contained in Final, Rev.1, Sampling and Analysis Plan, SWMU11, Tooele Army depot, Tooele, Utah, 7/21/03 to the extent possible. Where definitive guidance is not provided, data has been evaluated in a conservative manner using professional judgment. In cases where two qualifiers are listed as an action, such as "J/UJ", the first qualifier applies to positive results, and the second to non-detect results.

Samples were collected by North Wind Environmental, Inc., Idaho Falls, ID; analyses were performed by Mountain States Analytical, Salt Lake City, UT and were reported under sample delivery group (SDG) 0310129. Results have been evaluated electronically using electronic data deliverables (EDDs) provided by the laboratory. The laboratory data summary forms (hard copy) have been reviewed during this effort and compared to the automated review output. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative. The following quality control elements were evaluated during this review effort:

Technical Holding Times
Continuing Calibration Verification
Method Blank Contamination
Field Blank Contamination
Blank Spike Accuracy
Blank Spike Precision
Matrix Spike Accuracy
Matrix Spike Precision
Surrogate Recovery
Laboratory Duplicate Precision
Field Duplicate Precision

A minimum of ten percent of sample and QC results were manually evaluated for compliance with project specific requirements and consistency with hard copy results. The following reports were generated during the evaluation of this data set and are presented as attachments to this report as applicable.

Data Submission Warnings – Warnings encountered during the data submission process are evaluated and their affect on data quality is discussed in the narrative.

Batch – The analytical batch report is reviewed for completeness and compliance with project specific requirements. Incomplete or non-compliant run sequences are identified and their impact on data quality are discussed in the narrative.

QC Outlier – Results exceeding the evaluation criteria are reviewed for compliance with project requirements and a minimum of ten percent of the non-compliant QC values reported electronically are verified for consistency with hard-copy values.

Qualified Results – Qualified results are evaluated for compliance with project requirements and ten percent of qualified results are verified for consistency with the QC Outlier Report.

Field Duplicate – Field duplicate comparison results are evaluated for compliance with project requirements and ten percent of values reported are verified for consistency with the hard-copy data.

Rejected Results – All rejected results are evaluated for compliance with project requirements. The reason for rejection of the data is verified against hard copy data.

Analytical deficiencies, project non-compliance issues and inconsistencies with hard copy results observed during ADR evaluation process and their impact on data quality are summarized in the ADR narrative.

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Out of control events experienced by the laboratory have and the rejection of 0 % ( 0 results) of the data set. attachments, and discussed in the ADR narrative, when	These deficiencies are detailed in the referenced
Released by	 Date

ISSS-539-01 3/3 May 21,2004 12:46 pm

### **Batch Report**

Facility: SWMU 11 Lab: MSSL Filename: 0310129

Status: **Certified - 12/18/2003** 

User: DennisLeeke

Test Method: SW6010B
Prep Method: TOTAL
Leach Method: NONE

Test Batch	Prep Batch	Leach Batch	Location	Matrix	Field Sample ID	Lab Sample ID	Test Date and Time Sample Type
39571	12394	NA	LABQC	SQ		PBW12394	10/23/2003 3:03:00PM LB2
	12394	NA	LABQC	SQ		LCSW12394	10/23/2003 3:06:00PM BS2
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	0310129-02A	10/23/2003 3:11:00PM N1
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	031012902AMS	10/23/2003 3:19:00PM MS1
	12394	NA	SWMU11-CS-21	SO	S11WP1-03-CNF-A1	031012902AMS	10/23/2003 3:22:00PM SD1
	12394	NA	SWMU11-CS-22	SO	S11WP1-03-CNF-A2	0310129-03A	10/23/2003 3:46:00PM N1
	12394	NA	SWMU11-CS-23	SO	S11WP1-03-CNF-A3	0310129-04A	10/23/2003 3:51:00PM N1
	12394	NA	SWMU11-CS-24	SO	S11WP1-03-CNF-A4	0310129-05A	10/23/2003 3:56:00PM N1
	12394	NA	SWMU11-CS-25	SO	S11WP1-03-CNF-A5	0310129-06A	10/23/2003 4:01:00PM N1
	12394	NA	SWMU11-CS-26	SO	S11WP1-03-CNF-A6	0310129-07A	10/23/2003 4:06:00PM N1
	12394	NA	SWMU11-CS-27	SO	S11WP1-03-CNF-A7	0310129-08A	10/23/2003 4:11:00PM N1
	12394	NA	SWMU11-CS-28	SO	S11WP1-03-CNF-A8	0310129-09A	10/23/2003 4:16:00PM N1

## **Detected Results**

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310129

### Trace Metals by ICP

Test/Leach	Matrix	Field Sample ID	Type	<u>Analyte</u>	<u>RL</u>	Lab Result	Qualified Result	<u>Units</u>	Reason
SW6010B/NONE	SO	S11WP1-03-CNF-A1	N	Lead	7.9	2.9	<b>2.9</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Arsenic	8.4	1.8	<b>1.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	N	Lead	8.4	3.1	<b>3.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Arsenic	8.9	3.7	<b>3.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	N	Lead	8.9	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Arsenic	7.6	2.2	<b>2.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	N	Lead	7.6	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Arsenic	7.6	2.1	<b>2.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	N	Lead	7.6	2.5	<b>2.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Arsenic	8.0	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	N	Lead	8.0	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Arsenic	8.0	1.7	<b>1.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	N	Lead	8.0	3.7	<b>3.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Arsenic	7.7	3.5	<b>3.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	N	Lead	7.7	2.7	<b>2.7</b> J	MG/KG	TR

May 21,2004 12:47:13PM result.rpt v1.2.53

### **Qualified Results**

Facility: SWMU 11
Event: SWMU 11
Reference: ISSS-539-01

SDG: 0310129

### Trace Metals by ICP

Test/Leach	Matrix	Field Sample ID	Type	<u>Analyte</u>	<u>RL</u>	Lab Result	<b>Qualified Result</b>	<u>Units</u>	Reason
SW6010B/NONE	SO	S11WP1-03-CNF-A1	Ν	Lead	7.9	2.9	<b>2.9</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	Ν	Arsenic	8.4	1.8	<b>1.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A2	Ν	Lead	8.4	3.1	<b>3.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	Ν	Arsenic	8.9	3.7	<b>3.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A3	Ν	Lead	8.9	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	Ν	Arsenic	7.6	2.2	<b>2.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A4	Ν	Lead	7.6	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	Ν	Arsenic	7.6	2.1	<b>2.1</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A5	Ν	Lead	7.6	2.5	<b>2.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	Ν	Arsenic	8.0	2.8	<b>2.8</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A6	Ν	Lead	8.0	3.2	<b>3.2</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	Ν	Arsenic	8.0	1.7	1.7 J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A7	Ν	Lead	8.0	3.7	<b>3.7</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	Ν	Arsenic	7.7	3.5	<b>3.5</b> J	MG/KG	TR
SW6010B/NONE	SO	S11WP1-03-CNF-A8	Ν	Lead	7.7	2.7	<b>2.7</b> J	MG/KG	TR

May 21,2004 12:48:02PM result.rpt v1.2.53

### **Batch Report**

Facility: SWMU 11 Lab: MSSL Filename: 0310136

Status: **Certified - 12/18/2003** 

User: DennisLeeke

Test Method: SW8270C
Prep Method: SW3550
Leach Method: NONE

Test Batch	Prep Batch	Leach Batch	Location	<u>Matrix</u>	Field Sample ID	Lab Sample ID	Test Date and Time Sample Type	
39539	12391	NA	LABQC	SQ		MB12391	10/22/2003 1:38:00AM LB2	
	12391	NA	LABQC	SQ		LCS12391	10/22/2003 2:08:00AM BS2	
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	0310136-02A	10/22/2003 2:37:00AM N1	
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	031013602AMS	10/22/2003 3:07:00AM MS1	
	12391	NA	SWMU11-CS-29	SO	S11SP-03-CNF-A1	031013602AMS	10/22/2003 3:36:00AM SD1	
	12391	NA	SWMU11-CS-30	SO	S11SP-03-CNF-A2	0310136-03A	10/22/2003 4:06:00AM N1	
	12391	NA	SWMU11-CS-31	SO	S11SP-03-CNF-A3	0310136-04A	10/22/2003 4:35:00AM N1	
	12391	NA	SWMU11-CS-32	SO	S11SP-03-CNF-A4	0310136-05A	10/22/2003 5:05:00AM N1	
	12391	NA	SWMU11-CS-33	SO	S11SP-03-CNF-A5	0310136-06A	10/22/2003 5:34:00AM N1	
	12391	NA	SWMU11-CS-34	SO	S11SP-03-CNF-A6	0310136-07A	10/22/2003 6:04:00AM N1	
	12391	NA	SWMU11-CS-35	SO	S11SP-03-CNF-A7	0310136-08A	10/22/2003 6:33:00AM N1	
	12391	NA	SWMU11-CS-36	SO	S11SP-03-CNF-A8	0310136-09A	10/22/2003 7:03:00AM N1	

# Appendix G Disposal Documentation

North Wind, Inc. SWMU 11 CMCR

Document ID: NW-ID-2003-070

Revision ID: 0

Effective Date: September 2003

# **Engineering Design File**

# Hazardous Waste Determination for SWMU 11 at the Tooele Army Depot

Prepared for: Sacramento District U.S. Army Corps of Engineers Sacramento, California By North Wind, Inc. under contract No. DACW05-00-D-0024, D.O. 004



### **HAZARDOUS WASTE DETERMINATION**

1.	Project Fil	e No.:	2052.006	_2.	Project/Task:	USACE TEAD SWN	MU 11
3.	Subtask:	Dispos	sal				
4.	Title: Ha	zardous	Waste Determination fo	r SV	VMU 11		
5.	Summary:						
	from the w	vaste pi	corrective measures for le areas, sewage lagoon a Corrective Action progra	nd 1			
	during this	correc	Design File documents the tive action. The HWD colletermining whether or no	mpl	ies with requiren	nents of 40 CFR 262.11	
	The determ	ninatio	n is that the SWMU 11 co	orrec	ctive measures w	ill generate only non-R	CRA regulated
	Attachmer	nt 1 con	tains the Mountain States	s An	alytical Laborato	ory Reports.	
6.	Distributio	on (com	plete package):				
	Project F	ile 205	2.004				
	Distributio	on (sum	mary package only):				
7.	Review (R	and A	Approval (A) Signatures:				<u> </u>
		R/A	Typed Name/Organizati	on	Signature		Date
Pe	erformer	R	A. Armstrong, North W	ind			
	dependent eviewer	R	J. Medeiros, North Wind	d			
Re	equestor	A	T. Matzen, North Wind				
Ge	enerator	A	Larry McFarland, US A	rmy			

Engineering Design File	HAZARDOUS WASTE	Identifier:	NW-ID-2003-070
	DETERMINATION FOR SWMU 11,	Revision:	0
	TEAD	Page:	<b>1</b> of 6
North Wind, Inc.: (208) 528-8718		Date:	September 2003

#### 1. BACKGROUND

The SWMU 11 Laundry Effluent Pond and Waste Pile Areas are located in the central portion of TEAD in the center of the ammunition storage area. The laundry effluent pond and waste pile areas to be excavated consist of the effluent pond, sewage pond, and three waste piles. Laundry and shower discharges from Building 1267 were sent to the bermed, unlined laundry effluent pond from 1947 to 1990, and boiler blow-down was discharged there until 1995. The bermed, unlined sewage pond was constructed between 1978 and 1980 but never used. The sewage pond may have received flows emanating from a possible leach field associated with the septic tank. Currently neither pond contains water except for ephemeral water due to rain or snowmelt.

The waste piles lie to the east of the laundry effluent and sewage ponds. The area was identified due to the presence of waste on the ground surface. The waste piles contained wood fragments, metal banding, electrical wiring, metal shavings, and old automobile parts (brake drums, brake pads, and oil filters). Much of the surface debris was removed during the spring of 1993 and so the exact number of waste piles is difficult to determine. The current expression of the former piles is fine metallic debris, and forms little more than a slight rise in the topography.

#### 2. WASTE DESCRIPTION

The waste streams included in this evaluation are described in Table 1.

Table 1. Description of waste streams evaluated under this hazardous waste determination.

Waste Stream	Quantity	Description
Soil	700-1000 tons	Soil excavated from the ditch, consisting of silt, sand, gravels and cobbles with some vegetation. The soil is known to contain heavy metals that were discharged in an aqueous solution during historic operations. The soil may also contain up to 5 wt % debris such as vegetation, roots, etc. that may be removed from the SWMU during the removal action. This also includes plastic sheeting, used PPE, and other refuse generated during the removal action.

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North Wind, Inc.: (208) 528-8718	Date:	September 2003

#### 3. HAZARDOUS WASTE DETERMINATION

#### 3.1 Solid Waste Under 261.2?

The soil waste stream, as described above, does not technically meet the definition of solid waste under 40 CFR 261.2 because it is considered environmental media (soil, groundwater, surface water and sediments are considered environmental media). However, the waste can be subject to all applicable RCRA hazardous waste requirements if it contains listed hazardous constituents or if it exhibits a characteristic of hazardous waste.

#### **3.2** Excluded Under 40 CFR 261.4?

This waste does not meet the exclusion requirements under 40 CFR 261.4

#### 3.3 Listed RCRA Waste Under 40 CFR 261 Subpart D?

Based on a description of generating processes and previous sampling results summarized in the Corrective Measures Work Plan (AEEC 2002), there is no indication that any VOCs were present at this site. The waste material from the SWMU 11 site is not known to contain any listed hazardous waste as defined in 40 CFR 261 Subpart D.

#### 3.4 Characteristic RCRA Waste Under 40 CFR 261 Subpart C?

The soil waste stream evaluated in this document is considered contaminated environmental media. Therefore, although it does not meet the definition of a solid waste, it is nevertheless regulated under EPA's contained-in policy. Because there are no known process-listed wastes (261 Subpart D wastes) at this site, the only concern is whether this waste stream exhibits the characteristic of hazardous waste as identified in 40 CFR 261 Subpart C.

- 3.4.1 <u>261.21 (Ignitability)</u>: The waste does not exhibit the characteristic of ignitability listed under subsection 261.21. Ignitability is defined as being (1) liquid, other than an aqueous solution less than 24% alcohol by volume and has a flash point less than 60°C (140°F), (2) not a liquid and capable under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes, (3) an ignitable compressed gas, or (4) an oxidizer.
- 3.4.2 261.22 (Corrosivity): The waste does not meet the definition of corrosivity under 261.22 because the waste material is not aqueous or a liquid. The waste does not meet EPA's definition for the corrosive characteristic because the waste is a solid (soil). Furthermore, EPA has

Engineering Design File	Identifier: Revision: Page:	NW-ID-2003-070 0 <b>3</b> of 6
North Wind, Inc.: (208) 528-8718	Date:	September 2003

clarified that "Method 9045 [pH test for solids] is not to be used for corrosivity characteristic determinations" (EPA 1995).

- 3.4.3 <u>261.23 (Reactivity)</u>: The waste does not exhibit any of the characteristics of reactivity listed under subsection 261.23.
- 3.4.4 <u>261.24 (Toxicity)</u>: To evaluate the potential for toxicity, representative samples were obtained from the area to be excavated and analyzed for RCRA metals by the Toxicity Characteristic Leaching Procedure (SW 846 Method 1311). The sampling strategy selected by the USACE, in consultation with UDEQ, was to divide the excavation area into a number of grid blocks, each containing less than 85 cubic yards of soil in place. Five-point composite samples were then collected from each grid block at multiple depths using hand augers. A Field Sampling Plan was developed per EPA guidance to document the waste characterization sampling (North Wind 2003).

Analytical results from each sample represent the average leachable concentration of contaminants within a given grid block. To determine whether the waste contains a characteristic hazardous waste, the TCLP results are compared to the subpart C toxicity characteristic values in 40 CFR 261.24 (Table 2). The determination is that waste removed from the SWMU 11 excavation areas will not be identified as characteristic waste and will not carry characteristic waste codes.

Engineering Design File	HAZARDOUS WASTE DETERMINATION FOR SWMU 11, TEAD	Identifier: Revision: Page:	NW-ID-2003-070 0 <b>4</b> of 6
North Wind, Inc.: (208) 528-8718		Date:	September 2003

Table 2. Comparison of the TCLP sample results to the RCRA toxicity characteristic values.

### TCLP Sample Results<sup>1</sup> (mg/L)

				$Grid$ - $block^2$											
CAS#	Analyte	RCRA Limit (mg/L)	SP A1	SP B1	LP A1	LP B1	WP1 A1	WP1 A2	WP1 B1	WP2 A1	WP2 A2	WP2 B1	WP3 A1	WP3 A2	WP3 B1
7440382	Arsenic	5.0	ND <sup>3</sup>	0.06	0.034	ND	0.037	0.085	ND	0.036	0.064	ND	ND	ND	ND
7440393	Barium	100.0	0.844	0.931	0.81	0.687	0.815	0.675	0.866	0.692	0.797	0.808	0.705	0.722	0.924
7440439	Cadmium	1.0	0.0087	0.004	0.0378	0.0429	0.0076	0.0066	ND	0.0068	0.0071	ND	0.0043	0.0036	ND
7440473	Chromium	5.0	0.011	0.013	0.016	0.012	ND	ND	ND	0.029	ND	ND	ND	ND	ND
7439921	Lead	5.0	0.422	0.036	0.069	0.552	0.07	0.087	0.032	0.036	0.065	0.042	ND	ND	0.067
7439976	Mercury	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7782492	Selenium	1.0	ND	ND	ND	0.066	0.058	ND	0.057	ND	ND	ND	ND	ND	ND
7440224	Silver	5.0	0.0081	0.0091	0.0096	0.0074	ND	0.005	0.0097	0.0078	0.0081	0.0085	0.0052	0.0079	0.009
	Chara	cteristic?:	No	No	No	No	No	No	No	No	No	No	No	No	No

<sup>&</sup>lt;sup>1</sup> Laboratory reports are available in Attachment 1.

ND = non-detect, concentration is below analytical method detection limits. SP = Sewage Pond; LP = Laundry Pond; WP = Waste Pile

<sup>&</sup>lt;sup>2</sup> Sampling grid blocks were sized to represent less than 85 cubic yards of soil each. The prefix "A" represents the uppermost layer, "B" represents the lower, over-excavation layer as defined in the Work Plan (AEEC 2002).

Engineering Design File	Identifier: Revision: Page:	NW-ID-2003-070 0 5 of 6
North Wind, Inc.: (208) 528-8718	Date:	September 2003

#### 3.5 LDR Determination

As the soil to be removed from SWMU 11 is not a hazardous waste, the material is not restricted from land disposal and does not require treatment prior to disposal.

#### 3.6 TSCA Determination

There is no knowledge that TSCA regulated constituents were released to the SWMU 11 excavation areas.

#### 4. WASTE STORAGE LOCATION

It is anticipated that the soil material covered by this determination will be loaded and transported to a treatment and disposal facility as it is generated without temporary onsite accumulation.

#### 5. WASTE DISPOSAL

The hazardous waste material will be disposed of at a permitted disposal facility. It is anticipated that the hazardous waste will be transported to the Clean Harbors Grassy Mountain, Utah site, or alternatively to the U.S. Ecology Grandview, Idaho site. Non-regulated wastes will be disposed of at either a Subtitle D or Subtitle C facility, depending on availability.

#### 6. REFERENCES

AEEC, 2002, Final Remedial Action Plan SWMU 11 – Laundry Effluent Pond And Waste Pile Areas, December 2002.

EPA, 1995, Federal Register Notice April 4, 1995, 60 FR 17003.

North Wind, 2003, Abbreviated Field Sampling Plan for In Situ Waste Characterization, Tooele Army Depot Solid Waste Management Units 11 and 25, NW-ID-2003-041, Revision 1, July 2003.

Engineering Design File	Identifier: Revision: Page:	NW-ID-2003-070 0 <b>6</b> of 6
North Wind, Inc.: (208) 528-8718	Date:	September 2003

### **Attachment 1**

Mountain States Analytical, SWMU 11 Waste Characterization Sampling
Analytical Report No. 0308156-2 September 19, 2003

### Analytical Report

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

September 19, 2003

Thomas Matzen
North Wind Environmental, Inc.
545 Shoup Avenue
Idaho Falls, ID 83402
(208) 528-8718 Fax:

Project: TEAD SWMU 11 Work Order: 0308156

Dear Thomas Matzen,

Thank you for using Mountain States Analytical, LLC (MSA) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0308156-2 and contains 26 pages of information for the 13 samples submitted to MSA on Wednesday, August 20, 2003. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 26. For regulatory compliance reporting, individual pages or portions of this report may not be separated. Except as noted, the test results for the methods and parameters listed on MSA's most recent NELAC certification letter meet all requirements of NELAC.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msalabs.net.

Mountain States Analytical, LLC

Rolf E. Larsen Senior Project Manager



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Sample Summary**

Client:North Wind Environmental, Inc.Report Number:0308156-2Project:TEAD SWMU 11Date Reported:09/19/03

 Project:
 TEAD SWMU 11
 Date Reported:
 09/19/03

 Project ID:
 Work Order:
 0308156

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0308156-01A	S11-SP-03-CHR-A1-1		Soil	08/19/03
0308156-01B	SDG: NWE-010			09/18/03
0308156-02A	S11-SP-03-CHR-B1-1		Soil	08/19/03
0308156-03A	S11-LP-03-CHR-A1-1		Soil	08/19/03
0308156-04A	S11-LP-03-CHR-B1-1		Soil	08/19/03
0308156-05A	S11-WP1-03-CHR-A1-1		Soil	08/20/03
0308156-06A	S11-WP1-03-CHR-A2-1		Soil	08/20/03
0308156-07A	S11-WP1-03 CHR-B1-1		Soil	08/20/03
0308156-08A	S11-WP2-03-CHR-A1-1		Soil	08/19/03
0308156-09A	S11-WP2-03-CHR-A2-1		Soil	08/19/03
0308156-10A	S11-WP2-03-CHR-B1-1		Soil	08/19/03
0308156-11A	S11-WP3-03-CHR-A1-1		Soil	08/20/03
0308156-12A	S11-WP3-03-CHR-A2-1		Soil	08/20/03
0308156-13A	S11-WP3-03-CHR-B1-1		Soil	08/20/03

## **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

Report Number:

0308156-2

**Project:** TEAD SWMU 11

**Date Reported:** 

09/19/03

**Project ID:** 

**Work Order:** 0308156

Sample ID	Client Sample ID						Date Collec	eted
0308156-01A	S11-SP-03-CHR-A1-						08/19/03 15	:45
D		Leach		шт	D D .4.	ш	A call of a Date	шт
Parameter Maraury by CV	AA TCID	Start Date 09/02/03 15:20	End Date 09/03/03 08:20	HT	Prep Date	HT	<b>Analysis Date</b> 09/04/03 14:58	HT
Mercury by CV				28	09/03/03 15:30			28
Metals by hrICI	P (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:13	180
0308156-02A	S11-SP-03-CHR-B1-1						08/19/03 15	:50
Da		Leach		шт	Davis Data	шт	Amalausia Data	шт
Parameter CV	A A TOLD	Start Date	End Date	HT	Prep Date	НТ	Analysis Date	HT
Mercury by CV		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:00	28
Metals by hrICI	P (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:18	180
0308156-03A	S11-LP-03-CHR-A1-						08/19/03 15:00	
Parameter		Leach Start Date	ate End Date	нт	Prep Date	НТ	Analysis Date	НТ
Mercury by CV	AA TCI P	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30	ш	09/04/03 15:01	28
Metals by hrICI	•	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:23	180
	r (USACE)	09/02/03 13.20	09/03/03 08.20	100	09/04/03 08.20		09/18/03 14.23	160
0308156-04A	S11-LP-03-CHR-B1-						08/19/03 15	:10
<b>D</b> 4		Leach		ш	D D (	TTT	4 1 1 5	TIT
Parameter	A A TOLD	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CV		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:03	28
Metals by hrICI	P (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:27	180
0308156-05A	S11-WP1-03-CHR-A	1-1					08/20/03 07	:50
		Leach						
Parameter		Start Date	End Date	HT	Prep Date	HT	<b>Analysis Date</b>	HT
Mercury by CV		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:04	28
Metals by hrICI	P (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:32	180
0308156-06A	S11-WP1-03-CHR-A2						08/20/03 08	:00
		Leach		****	<b>D D</b> :	****		
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CV		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:06	28
Metals by hrICI	P (USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:36	180

<sup>\* -</sup> The recommended holding time was exceeded

## **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

i wind Environmental, inc.

**Project:** TEAD SWMU 11

**Project ID:** 

**Report Number:** 0308156-2

**Date Reported:** 09/19/03

**Work Order:** 0308156

								cted
0308156-07A	S11-WP1-03 CHR-B	<del></del>					08/20/03 08:	:10
D		Leach		TTT	D D (	TTT		TITE
Parameter	TOLD	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:07	28
Metals by hrICP (U	JSACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:41	180
0308156-08A	S11-WP2-03-CHR-A						08/19/03 17:	:35
Parameter		Leach Start Date	ate End Date	ш	Duan Data	НТ	Analysis Data	НТ
Mercury by CVAA	TCLD	09/02/03 15:20	09/03/03 08:20	HT 28	Prep Date 09/03/03 15:30	н	<b>Analysis Date</b> 09/04/03 15:09	28
Metals by hrICP (U		09/02/03 15:20	09/03/03 08:20	180	09/03/03 13:30		09/04/03 13:09	180
0308156-09A	S11-WP2-03-CHR-A						08/19/03 17:	:40
Developed		Leach		шт	D D. 4 .	ш	A sel sin Dete	ш
Parameter	TCID	Start Date	End Date	HT	Prep Date	НТ	Analysis Date	HT
Mercury by CVAA		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:10	28
Metals by hrICP (U	JSACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 14:50	180
0308156-10A	S11-WP2-03-CHR-E						08/19/03 17:	:55
Damamatan		Leach		ш	Duan Data	шт	Amalouia Data	шт
Parameter Maraum by CVAA	TCLD	<b>Start Date</b> 09/02/03 15:20	End Date 09/03/03 08:20	HT 28	Prep Date 09/03/03 15:30	HT	<b>Analysis Date</b> 09/04/03 15:15	HT 28
Mercury by CVAA								
Metals by hrICP (U	JSACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:04	180
0308156-11A	S11-WP3-03-CHR-A						08/20/03 08:	:35
D		Leach		шт	D D. 4 .	ш	A colored Descri	ш
Parameter	TOLD	Start Date	End Date	HT	<b>Prep Date</b>	HT	Analysis Date	HT
Mercury by CVAA		09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 14:44	28
Metals by hrICP (U	JSACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 13:32	180
0308156-12A	S11-WP3-03-CHR-A						08/20/03 08:	:45
Danamatan		Leach		IIT	Prop Deta	ш	Analysis Data	ш
Parameter Manage by CVAA	TCID	Start Date	End Date	HT	Prep Date	HT	<b>Analysis Date</b> 09/04/03 15:16	HT
Mercury by CVAA	A, ICLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:16	28

<sup>\* -</sup> The recommended holding time was exceeded

# Mountain States Analytical, LLC

## **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Holding Time Summary**

Client: North Wind Environmental, Inc.

Report Number:

0308156-2

**Project:** TEAD SWMU 11

Date Reported:

09/19/03

Project ID:

Work Order:

0308156

Sample ID	Client Sample ID						Date Collec	cted
Metals by hrICF	(USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:09	180
0308156-13A	S11-WP3-03-CHR-F	31-1 Leach	ate				08/20/03 08	:55
Parameter		Start Date	End Date	HT	Prep Date	HT	<b>Analysis Date</b>	HT
Mercury by CV	AA, TCLP	09/02/03 15:20	09/03/03 08:20	28	09/03/03 15:30		09/04/03 15:18	28
Metals by hrICF	(USACE)	09/02/03 15:20	09/03/03 08:20	180	09/04/03 08:20		09/18/03 15:14	180

# **Analytical Report**

1645 West 2200 South  $\,\cdot\,$  Salt Lake City, Utah  $\,84119\,\cdot\,800\text{-}973\text{-}6724$ 

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-01A

(208) 528-8718 Client Sample ID: S11-SP-03-CHR-A1-1

**Date Collected:** 08/19/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extrac	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 anal	lysis: 100% solids						
SW-846 1311: TCLP Extrac	-						
	ction, Mercury, Sond						
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 anal	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 14:58	LC
SW-846 7470A: Mercury Pi	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by h	rICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:13	JMR
Barium	0.844	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Cadmium	0.0087 J	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Chromium	0.011 J	0.01	0.05	mg/L	1	09/18/03 14:13	JMR
Lead	0.422	0.03	0.15	mg/L	1	09/18/03 14:13	JMR
Nickel	0.043 J	0.02	0.1	mg/L	1	09/18/03 14:13	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:13	JMR
Silver	0.0081 J	0.003	0.015	mg/L	1	09/18/03 14:13	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:13	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0308156-2

North Wind Environmental, Inc.

Date Reported: 09/19/03

545 Shoup Avenue

Work Order: 0308156

Idaho Falls, ID 83402

Lab Sample ID: 0308156-02A

(208) 528-8718 Client Sample ID: S11-SP-03-CHR-B1-1

**Date Collected:** 08/19/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 1311: TCLP Extra	ction, Mercury, Solid						
Prep Batch ID: 12052	,					09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	y CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:00	LC
SW-846 7470A: Mercury P.	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by h	nrICP (USACE), Extract						
Arsenic	0.060 J	0.03	0.15	mg/L	1	09/18/03 14:18	JMR
Barium	0.931	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Cadmium	$0.0040 \; \mathrm{J}$	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Chromium	0.013 J	0.01	0.05	mg/L	1	09/18/03 14:18	JMR
Lead	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:18	JMR
Nickel	0.025 J	0.02	0.1	mg/L	1	09/18/03 14:18	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:18	JMR
Silver	0.0091 J	0.003	0.015	mg/L	1	09/18/03 14:18	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:18	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South  $\,\cdot\,$  Salt Lake City, Utah  $\,84119\,\cdot\,800\text{-}973\text{-}6724$ 

Client:	Thomas Matzen	Report Number:	0308156-2

North Wind Environmental, Inc.

Date Reported: 09/19/03

545 Shoup Avenue

Work Order: 0308156

Idaho Falls, ID 83402

Lab Sample ID: 0308156-03A

(208) 528-8718 Client Sample ID: S11-LP-03-CHR-A1-1

**Date Collected:** 08/19/03

**Project:** TEAD SWMU 11 **Date Received:** 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 1311: TCLP Extra	ction, Mercury, Solid						
Prep Batch ID: 12052	, , ,					09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	y CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:01	LC
SW-846 7470A: Mercury P.	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by I	nrICP (USACE), Extract						
Arsenic	0.034 J	0.03	0.15	mg/L	1	09/18/03 14:23	JMR
Barium	0.810	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Cadmium	0.0378	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Chromium	0.016 J	0.01	0.05	mg/L	1	09/18/03 14:23	JMR
Lead	0.069 J	0.03	0.15	mg/L	1	09/18/03 14:23	JMR
Nickel	0.247	0.02	0.1	mg/L	1	09/18/03 14:23	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:23	JMR
Silver	0.0096 J	0.003	0.015	mg/L	1	09/18/03 14:23	JMR
Thallium	0.060 J	0.05	0.25	mg/L	1	09/18/03 14:23	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South  $\,\cdot\,$  Salt Lake City, Utah  $\,84119\,\cdot\,800\text{-}973\text{-}6724$ 

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-04A

(208) 528-8718 Client Sample ID: S11-LP-03-CHR-B1-1

**Date Collected:** 08/19/03

**Project:** TEAD SWMU 11 **Date Received:** 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 1311: TCLP Extra	ction, Mercury, Solid						
Prep Batch ID: 12052	,					09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury b	y CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:03	LC
SW-846 7470A: Mercury P	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by l	nrICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:27	JMR
Barium	0.687	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Cadmium	0.0429	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Chromium	0.012 J	0.01	0.05	mg/L	1	09/18/03 14:27	JMR
Lead	0.552	0.03	0.15	mg/L	1	09/18/03 14:27	JMR
Nickel	0.110	0.02	0.1	mg/L	1	09/18/03 14:27	JMR
Selenium	0.066 J	0.05	0.25	mg/L	1	09/18/03 14:27	JMR
Silver	0.0074 J	0.003	0.015	mg/L	1	09/18/03 14:27	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:27	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03
	545 Choup Avanua	Work Ordon	0209156

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-05A

(208) 528-8718 Client Sample ID: S11-WP1-03-CHR-A1-1

**Date Collected:** 08/20/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Ex	traction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 a	analysis: 100% solids						
SW-846 1311: TCLP Ex	traction, Mercury, Solid						
	raction, mercury, some					00/02/02 15 20	DDW
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 a	analysis: 100% solids						
SW-846 3010A: Flame/h	rICP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury	y by CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:04	LC
SW-846 7470A: Mercury	y Prep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals b	oy hrICP (USACE), Extract						
Arsenic	0.037 J	0.03	0.15	mg/L	1	09/18/03 14:32	JMR
Barium	0.815	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Cadmium	0.0076 J	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:32	JMR
Lead	0.070 J	0.03	0.15	mg/L	1	09/18/03 14:32	JMR
Nickel	0.032 J	0.02	0.1	mg/L	1	09/18/03 14:32	JMR
Selenium	0.058 J	0.05	0.25	mg/L	1	09/18/03 14:32	JMR
Silver	U	0.003	0.015	mg/L	1	09/18/03 14:32	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:32	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03
	545 Shoun Avenue	Work Order:	0308156

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-06A

(208) 528-8718 Client Sample ID: S11-WP1-03-CHR-A2-1

**Date Collected:** 08/20/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 1311: TCLP Extra	ction, Mercury, Solid						
Prep Batch ID: 12052	· · · · · · · · · · · · · · · · · · ·					09/02/03 15:20	DBW
•	lucio: 1000/ colido					03/02/03 13.20	DD II
Note for 09/02/03 15:20 ana	19818. 100% solius						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	y CVAA, TCLP, Extract						
Mercury	U	1	5	μg/L	1	09/04/03 15:06	LC
SW-846 7470A: Mercury P.	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by h	nrICP (USACE), Extract						
Arsenic	0.085 J	0.03	0.15	mg/L	1	09/18/03 14:36	JMR
Barium	0.675	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Cadmium	0.0066 J	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:36	JMR
Lead	0.087 J	0.03	0.15	mg/L	1	09/18/03 14:36	JMR
Nickel	0.038 J	0.02	0.1	mg/L	1	09/18/03 14:36	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:36	JMR
Silver	0.0050 J	0.003	0.015	mg/L	1	09/18/03 14:36	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:36	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:Thomas MatzenReport Number:0308156-2North Wind Environmental, Inc.Date Reported:09/19/03

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-07A

(208) 528-8718 Client Sample ID: S11-WP1-03 CHR-B1-1

**Date Collected:** 08/20/03

**Project:** TEAD SWMU 11 **Date Received:** 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 1311: TCLP Extra	ction, Mercury, Solid						
	, , , , , , , , , , , , , , , , , , ,					00/02/02 15:20	DDW
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	y CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:07	LC
SW-846 7470A: Mercury P	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by I	nrICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 14:41	JMR
Barium	0.866	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:41	JMR
Lead	0.032 J	0.03	0.15	mg/L	1	09/18/03 14:41	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 14:41	JMR
Selenium	0.057 J	0.05	0.25	mg/L	1	09/18/03 14:41	JMR
Silver	0.0097 J	0.003	0.015	mg/L	1	09/18/03 14:41	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:41	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-08A

(208) 528-8718 Client Sample ID: S11-WP2-03-CHR-A1-1

**Date Collected:** 08/19/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extractio	n, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
•	1000/1:4-						
Note for 09/02/03 15:20 analysis	s: 100% solids						
SW-846 1311: TCLP Extractio	n, Mercury, Solid						
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis	s: 100% solids						
,							
SW-846 3010A: Flame/hrICP F	Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by C	VAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:09	LC
SW-846 7470A: Mercury Prep	CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrIC	CP (USACE), Extract						
Arsenic	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:46	JMR
Barium	0.692	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Cadmium	$0.0068 \; \mathrm{J}$	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Chromium	0.029 J	0.01	0.05	mg/L	1	09/18/03 14:46	JMR
Lead	0.036 J	0.03	0.15	mg/L	1	09/18/03 14:46	JMR
Nickel	0.024 J	0.02	0.1	mg/L	1	09/18/03 14:46	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:46	JMR
Silver	0.0078 J	0.003	0.015	mg/L	1	09/18/03 14:46	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:46	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:Thomas MatzenReport Number:0308156-2North Wind Environmental, Inc.Date Reported:09/19/03

545 Shoup Avenue Work Order: 0308156
Idaho Falls, ID 83402 Lab Sample ID: 0308156-09A

(208) 528-8718 Client Sample ID: S11-WP2-03-CHR-A2-1

**Date Collected:** 08/19/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extractio	n, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis	s: 100% solids						
SW-846 1311: TCLP Extractio							
	n, Mercury, Sona					00/02/02 15 20	DDW
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analysis	s: 100% solids						
SW-846 3010A: Flame/hrICP F	Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
<b>F</b>							
SW-846 7470A: Mercury by C	VAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:10	LC
SW-846 7470A: Mercury Prep	CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hrIC	CP (USACE), Extract						
Arsenic	0.064 J	0.03	0.15	mg/L	1	09/18/03 14:50	JMR
Barium	0.797	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Cadmium	0.0071 J	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 14:50	JMR
Lead	0.065 J	0.03	0.15	mg/L	1	09/18/03 14:50	JMR
Nickel	0.033 J	0.02	0.1	mg/L	1	09/18/03 14:50	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 14:50	JMR
Silver	0.0081 J	0.003	0.015	mg/L	1	09/18/03 14:50	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 14:50	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

# **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03
	545 Shoun Avenue	Work Order	0308156

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-10A

TEAD SWMU 11 **Date Received:** 08/20/03 13:30

Project ID:Matrix:SoilPurchase Order:COC ID:27344

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extra	ction, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 anal	lysis: 100% solids						
	-						
SW-846 1311: TCLP Extra	ction, Mercury, Sond						
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 ana	lysis: 100% solids						
SW-846 3010A: Flame/hrIC	CP Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by	v CVAA, TCLP, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:15	LC
SW-846 7470A: Mercury Pr	rep CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by h	rICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:04	JMR
Barium	0.808	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:04	JMR
Lead	$0.042 \; \mathrm{J}$	0.03	0.15	mg/L	1	09/18/03 15:04	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 15:04	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:04	JMR
Silver	$0.0085 \; \mathrm{J}$	0.003	0.015	mg/L	1	09/18/03 15:04	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 15:04	JMR

**Project:** 

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

Analytical Report

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0308156-2

North Wind Environmental, Inc. Date Reported: 09/19/03

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-11A

(208) 528-8718 Client Sample ID: S11-WP3-03-CHR-A1-1

**Date Collected:** 08/20/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extracti	on, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analys	sis: 100% solids						
SW-846 1311: TCLP Extracti	on, Mercury, Solid						
	on, wereary, some					00/02/02 15:20	DDW
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analys	sis: 100% solids						
SW-846 3010A: Flame/hrICP	Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
SW-846 7470A: Mercury by 0	CVAA, TCLP, Extract						
Mercury	U	1	5	μg/L	1	09/04/03 14:44	LC
SW-846 7470A: Mercury Pre	p CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
· · · · · · · · · · · · · · · · · · ·							
SW-846 6010B: Metals by hrl	ICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 13:32	JMR
Barium	0.705	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Cadmium	0.0043 J	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 13:32	JMR
Lead	U	0.03	0.15	mg/L	1	09/18/03 13:32	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 13:32	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 13:32	JMR
Silver	0.0052 J	0.003	0.015	mg/L	1	09/18/03 13:32	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 13:32	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

**Analytical Report** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Thomas Matzen Report Number: 0308156-2

North Wind Environmental, Inc.

Date Reported: 09/19/03

545 Shoup Avenue

Work Order: 0308156

Idaho Falls, ID 83402

Lab Sample ID: 0308156-12A

(208) 528-8718 Client Sample ID: S11-WP3-03-CHR-A2-1

**Date Collected:** 08/20/03

Project: TEAD SWMU 11 Date Received: 08/20/03 13:30

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 1311: TCLP Extracti	ion, Metals, Solid						
Prep Batch ID: 12053						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analys	sis: 100% solids						
SW-846 1311: TCLP Extracti							
	ion, Mercury, Sona						
Prep Batch ID: 12052						09/02/03 15:20	DBW
Note for 09/02/03 15:20 analys	sis: 100% solids						
SW-846 3010A: Flame/hrICP	Prep, Extract						
Prep Batch ID: 12077						09/04/03 08:20	BBO
CVV 046 F4504 NA 1 4	CVAA TCI D E 4						
SW-846 7470A: Mercury by 0	CVAA, ICLP, Extract						
Mercury	U	1	5	μg/L	1	09/04/03 15:16	LC
SW-846 7470A: Mercury Pre	p CVAA, Extract						
Prep Batch ID: 12073					10	09/03/03 15:30	TM
SW-846 6010B: Metals by hr	ICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:09	JMR
Barium	0.722	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Cadmium	0.0036 J	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:09	JMR
Lead	U	0.03	0.15	mg/L	1	09/18/03 15:09	JMR
Nickel	U	0.02	0.1	mg/L	1	09/18/03 15:09	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:09	JMR
Silver	0.0079 J	0.003	0.015	mg/L	1	09/18/03 15:09	JMR
Thallium	U	0.05	0.25	mg/L	1	09/18/03 15:09	JMR

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

 $<sup>\</sup>ensuremath{^*}$  - Result is greater than the associated action level

# ......... Mountain States Analytical, LLC

### **Analytical Report**

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

**TEAD SWMU 11** 

Note for 09/02/03 15:20 analysis: 100% solids

Client:	Thomas Matzen	Report Number:	0308156-2
	North Wind Environmental, Inc.	Date Reported:	09/19/03
	545 Shoup Avenue	Work Order:	0308156

 545 Shoup Avenue
 Work Order:
 0308156

 Idaho Falls, ID 83402
 Lab Sample ID:
 0308156-13A

(208) 528-8718 Client Sample ID: S11-WP3-03-CHR-B1-1
Date Collected: 08/20/03

**Date Collected:** 08/20/03 **Date Received:** 08/20/03 13:30

Project ID: Matrix: Soil
Purchase Order: COC ID: 27344

MDL **PQL** Units DF **Date Analyzed** Analyst **Parameter** Result SW-846 1311: TCLP Extraction, Metals, Solid Prep Batch ID: 12053 09/02/03 15:20 **DBW** Note for 09/02/03 15:20 analysis: 100% solids SW-846 1311: TCLP Extraction, Mercury, Solid Prep Batch ID: 12052 09/02/03 15:20 **DBW** 

SW-846 3010A:	Flame/hrICP Prep, Extract		
Prep Batch ID:	12077	09/04/03 08:20	BBO

SW-640 /4/0A: Mercury by CVAA,	ICLF, Extract						
Mercury	U	1	5	$\mu g/L$	1	09/04/03 15:18	LC

SW-846 7470A: Mercury Prep CVAA, Extract			
Prep Batch ID: 12073	10	09/03/03 15:30	TM

SW-846 6010B:	Metals by hrICP (USACE), Extract						
Arsenic	U	0.03	0.15	mg/L	1	09/18/03 15:14	JMR
Barium	0.924	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Cadmium	U	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Chromium	U	0.01	0.05	mg/L	1	09/18/03 15:14	JMR
Lead	0.067 J	0.03	0.15	mg/L	1	09/18/03 15:14	JMR
Nickel	0.024 J	0.02	0.1	mg/L	1	09/18/03 15:14	JMR
Selenium	U	0.05	0.25	mg/L	1	09/18/03 15:14	JMR
Silver	0.0090 Ј	0.003	0.015	mg/L	1	09/18/03 15:14	JMR
Thallium	0.059 J	0.05	0.25	mg/L	1	09/18/03 15:14	JMR

**Project:** 

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

<sup>\* -</sup> Result is greater than the associated action level

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

**Report Number:** 0308156-2 North Wind Environmental, Inc. **Client:** 09/19/03 **Date Reported:** 

**Project:** Work Order: 0308156 **Project ID:** 

SW-846 6010B: Metals by hrICP (USACE), Extract

TEAD SWMU 11

QC Type: Method Blank

Sample ID: PBW-12077 **Analysis Date:** 09/18/03 13:24 **Units:** mg/L Run ID: TJA-IRIS\_030918A Prep Batch ID: 12077 Seq No: 479608

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	0.018	0	0	0	-0.06	0.03		
Barium	0.00032	0	0	0	-0.006	0.003		
Cadmium	0.000080	0	0	0	-0.008	0.004		
Chromium	0.00012	0	0	0	-0.02	0.01		
Lead	0.0035	0	0	0	-0.06	0.03		
Nickel	0.00020	0	0	0	-0.02	0.02		
Selenium	0.028	0	0	0	-0.2	0.1		
Silver	0.000050	0	0	0	-0.02	0.01		
Thallium	-0.025	0	0	0	-0.04	0.04		

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-12077 **Analysis Date:** 09/18/03 13:28 Units: mg/L Seq No: 479610 Run ID: TJA-IRIS 030918A Prep Batch ID: 12077

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	0.984		1.00	98.4	80	120		
Barium	0.191		0.200	95.6	80	120		
Cadmium	0.101		0.100	101	80	120		
Chromium	0.410		0.400	103	80	120		
Lead	0.963		1.00	96.3	80	120		
Nickel	0.418		0.400	104	80	120		
Selenium	0.984		1.00	98.4	80	120		
Silver	0.0986		0.100	98.6	80	120		
Thallium	0.867		1.00	86.7	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

**Report Number:** 0308156-2 **Client:** North Wind Environmental, Inc. 09/19/03 **Date Reported:** 

Work Order: 0308156 **Project ID:** 

QC Type: Sample Duplicate

TEAD SWMU 11

**Project:** 

Sample ID: 0308156-11A D **Analysis Date:** 09/18/03 13:36 Units: mg/L TJA-IRIS 030918A Seq No: 479612 Run ID: Prep Batch ID: 12077

Parameter	Result	Spike Parent	True Percent Value Recovery	Low Limit	High Limit	Duplicate Parent	RF RPD Li	
			,					
Arsenic	U					U	NC	20
Barium	0.711					0.705	0.76	20
Cadmium	0.0043 J					0.0043 J	0.23	20
Chromium	U					U	NC	20
Lead	U					U	NC	20
Nickel	U					U	NC	20
Selenium	U					U	NC	20
Silver	$0.0048 \mathrm{J}$					0.0052 J	7.0	20
Thallium	U					U	NC	20

QC Type: Matrix Spike Sample ID: 0308156-11A MS

**Analysis Date:** 09/18/03 13:40 Units: mg/L Run ID: TJA-IRIS 030918A Prep Batch ID: 12077 Seq No: 479613

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	1.09	U	1.00	109	80	120		
Barium	0.937	0.705	0.200	116	80	120		
Cadmium	0.0964	0.0043 J	0.100	92.0	80	120		
Chromium	0.383	U	0.400	95.7	80	120		
Lead	0.984	U	1.00	98.4	80	120		
Nickel	0.421	U	0.400	105	80	120		
Selenium	1.09	U	1.00	109	80	120		
Silver	0.106	0.0052 J	0.100	101	80	120		
Thallium	0.987	U	1.00	98.7	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 

0308156-2

Project: **TEAD SWMU 11**  **Date Reported:** 

09/19/03

Project ID:

Run ID:

**Parameter** 

Arsenic

Barium

Work Order:

0308156

QC Type: Matrix Spike Duplicate Sample ID:

0308156-11A MSD

09/18/03 13:43 **Analysis Date:** 

**Units:** mg/L Seq No: 479614

TJA-IRIS 030918A 12077 **Prep Batch ID:** 

Result

1.11

0.916

Spike True Percent Low High **Duplicate RPD Parent** Value Recovery Limit Limit **Parent RPD** Limit U 1.00 111 80 120 1.09 2.0 20 0.705 0.200 106 80 120 0.937 2.2 20 0.0043 J 0.100 95.6 80 120 0.0964 3.6 20 U 97.2 80 120 1.6 20 0.400 0.383

Cadmium 0.0999 Chromium 0.389 Lead 1.02 U 1.00 102 80 120 0.984 3.2 20 Nickel 0.414 U 0.400 103 80 120 0.421 1.7 20 Selenium 1.08 U 1.00 108 80 120 1.09 1.0 20 Silver 0.106 0.0052 J 0.100 101 80 120 0.106 0.42 20 Thallium 0.962U 1.00 96.2 80 120 0.987 2.6 20

QC Type: Pre-Preservation Spike

Sample ID: 0308156-11A S Run ID: TJA-IRIS 030918A **Analysis Date:** 09/18/03 13:48 12077

mg/L Units:

Prep Batch ID: Seq No: 479615

		Spike	True	Percent	Low	High	<b>Duplicate</b>	RPD
Parameter	Result	Parent	Value	Recovery	Limit	Limit	Parent	RPD Limit
Arsenic	5.43	U	5.00	109	50			
Barium	9.69	0.705	10.0	89.9	50			
Cadmium	0.102	0.0043 J	0.100	97.4	50			
Chromium	0.497	U	0.500	99.3	50			
Lead	0.499	U	0.500	99.8	50			
Nickel	4.81	U	5.00	96.1	50			
Selenium	5.04	U	5.00	101	50			
Silver	0.102	$0.0052 \; \mathrm{J}$	0.100	97.2	50			
Thallium	0.20 J	U	0.20	100	50			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

0308156-2

**Report Number:** 

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

TEAD SWMU 11 Date Reported: 09/19/03

Project ID: Work Order: 0308156

QC Type: Post Digestion/Distillation Spike

**Project:** 

 Sample ID:
 0308156-11A A
 Analysis Date:
 09/18/03 13:54
 Units:
 mg/L

 Run ID:
 TJA-IRIS\_030918A
 Prep Batch ID:
 12077
 Seq No:
 479616

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	1.15	U	1.00	115	75	125		
Barium	0.893	0.705	0.200	93.7	75	125		
Cadmium	0.106	0.0043 J	0.100	102	75	125		
Chromium	0.415	U	0.400	104	75	125		
Lead	1.01	U	1.00	101	75	125		
Nickel	0.431	U	0.400	108	75	125		
Selenium	1.10	U	1.00	110	75	125		
Silver	0.113	0.0052 J	0.100	108	75	125		
Thallium	0.971	U	1.00	97.1	75	125		

QC Type: Serial Dilution

 Sample ID:
 0308156-11A L
 Analysis Date:
 09/18/03 13:59
 Units:
 mg/L

 Run ID:
 TJA-IRIS 030918A
 Prep Batch ID:
 12077
 Seq No:
 479617

Parameter	Result	Spike Parent	True Percent Value Recovery	Low Limit	High Limit			%D Limit
Arsenic	U					U	NC	10
Barium	0.700					0.705	0.76	10
Cadmium	U					0.0043 J	NC	10
Chromium	U					U	NC	10
Lead	U					U	NC	10
Nickel	U					U	NC	10
Selenium	U					U	NC	10
Silver	U					$0.0052 \; \mathrm{J}$	NC	10
Thallium	U					U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Report Number:

0308156-2

**Project:** TEAD SWMU 11

**Date Reported:** 

09/19/03

**Project ID:** 

Work Order:

0308156

**QC Type:** TCLP Blank

Sample ID: TBLK-12052 Run ID: TJA-IRIS 030 Analysis Date:

09/18/03 15:19

**Units:** mg/L **Seq No:** 479647

TJA-IRIS\_030918A **Prep Batch ID:** 12077

\_

Parameter	Result	Spike Parent		Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	-0.028	0	0	0	-0.06	0.25		
Barium	0.128	0	0	0	-0.006	1.05		
Cadmium	0.00032	0	0	0	-0.006	0.0055		
Chromium	0.0027	0	0	0	-0.02	0.03		
Lead	0.068 JS(5b)	0	0	0	-0.06	0.0375		
Nickel	0.0017	0	0	0	-0.02	0.55		
Selenium	0.054 JS(5b)	0	0	0	-0.08	0.05		
Silver	-0.0026	0	0	0	-0.006	0.01		
Thallium	0.020	0	0	0	-0.08	0.04		

5b: Extract blank indicates a high bias - no sample data significantly impacted

S -Results outside normal recovery limits



0308156-2

09/19/03

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#### **Quality Control Summary**

Client: North Wind Environmental, Inc. Report Number:

Project: TEAD SWMU 11 Date Reported:

Project ID: Work Order: 0308156

SW-846 7470A: Mercury by CVAA, TCLP, Extract

QC Type: Method Blank

 Sample ID:
 PBW-12073
 Analysis Date:
 09/04/03 14:41
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474846

Spike True Percent Low High Duplicate RPD Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Mercury -0.054 0 0 0 -0.2 0.1

QC Type: Laboratory Control Sample (Water)

 Sample ID:
 LCSW-12073
 Analysis Date:
 09/04/03 14:43
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474847

Spike True Percent Low High Duplicate RPD Parameter Result Parent Value Recovery Limit Limit Parent RPD Limit

Mercury 5.09 5.00 102 80 120

QC Type: Sample Duplicate

 Sample ID:
 0308156-11A D
 Analysis Date:
 09/04/03 14:46
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474849

Spike True Percent High **Duplicate RPD** Parameter Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit Mercury U U NC 20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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#### **Quality Control Summary**

Client: North Wind Environmental, Inc.

Project: TEAD SWMU 11

Date Report Number: 0308156-2

09/19/03

Project: TEAD SWMU 11 Date Reported: 09/19/03

Project ID: Work Order: 0308156

QC Type: Matrix Spike

 Sample ID:
 0308156-11A MS
 Analysis Date:
 09/04/03 14:47
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474850

Parameter Result Spike True Percent Low High Duplicate RPD Value Recovery Limit Limit Parent RPD Limit

Mercury 46.1 U 50.0 92.1 80 120

**QC Type:** Matrix Spike Duplicate

 Sample ID:
 0308156-11A MSD
 Analysis Date:
 09/04/03 14:49
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474851

High RPD True Percent **Duplicate** Spike Low Result **Parent RPD** Limit **Parameter** Value Recovery Limit Parent Limit 48.8 U 50.0 97.7 80 120 46.1 5.8 20 Mercury

**QC Type:** Pre-Preservation Spike

 Sample ID:
 0308156-11A S
 Analysis Date:
 09/04/03 14:50
 Units:
 μg/L

 Run ID:
 FIMS 030904A
 Prep Batch ID:
 12073
 Seq No:
 474852

Parameter Result Spike True Percent Low High Duplicate RPD Value Recovery Limit Limit Parent RPD Limit

Mercury 20.4 U 25.0 81.5 50

QC Type: Serial Dilution Sample ID: 0308156-11A L

 Sample ID:
 0308156-11A L
 Analysis Date:
 09/04/03 14:53
 Units:
 μg/L

 Run ID:
 FIMS\_030904A
 Prep Batch ID:
 12073
 Seq No:
 474853

Spike True Percent Low High Duplicate %D
Parameter Result Parent Value Recovery Limit Limit Parent %D Limit

Mercury U NC 10

U - Not detected above the MDL B - Analyte detected in the associated Method Blank

Analyte detected in the associated Method Blank S -Results outside normal recovery limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



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#### **Quality Control Summary**

**Client:** North Wind Environmental, Inc. **Report Number:** 

0308156-2

**TEAD SWMU 11** Project:

**Date Reported:** 

09/19/03

Project ID:

Work Order:

0308156

TCLP Blank QC Type:

Sample ID: TBLK-12052 **Analysis Date:** 09/04/03 15:21 **Units:** μg/L

FIMS 030904A Run ID:

Prep Batch ID:

12073

Seq No: 474871

Spike True Percent Low High **Duplicate** RPD **Parameter** Result **Parent** Value Recovery Limit Limit **Parent RPD** Limit

0 0 0 Mercury -0.13-0.21.25

Post Digestion/Distillation Spike QC Type:

Sample ID: 0308156-11A A Run ID: FIMS\_030904A **Analysis Date:** 09/04/03 15:44

Prep Batch ID: 12073 Units: μg/L

Seq No: 474874

True Percent RPD Spike High **Duplicate** Low Result **Parent** Value Recovery **RPD** Limit **Parameter** Limit Limit Parent

Mercury 49.8 U 50.0 99.6 85 115

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Website: www.msailabs E-mail: service@msailabs.com

27344
Sample Chain of Custody
Analysis Request Form

ample Identification  5/1-5P-03-CHR-A1-1  5/1-5P-03-CHR-B1-1  5/1-LP-03-CHR-B1-1  5/1-LP-03-CHR-B1-1	P.O.#:    Date   Time   Collected   Collec	Grab Composite Solid Aqueous Crappic Liquid	Organic Liquid Multi-phase Number of Cor Pres Ok 3 4 5 6 7 TCLP Meta Pres. 1 2 3 4 5 6 7	Pres. 1 2 3 4 5 6 7  Pres. 1 2 3 4 5 6 7	Pres. 1 2 3 4 5 6 7	Pres. 1 2 3 4 5 6 7	Pres. 1 2 3 4 5 6 7  Pres. 1 2 3 4 5 6 7
1/2	$\neg \neg$	×					
3 511-LP-03-CHR-BI-1 5 511-WP1-03-CHR-AI-1	_	××					
511-WP1-03-CHR-AZY	8/20/63 0800	00 X X					
B 511-1292-03-CHR- A1-1		-	-				
10 511-WPZ-03-CHR-AZH	8/19/03 1740 8/19/03 1755						
12 511 - WP3-03-CHR-A1-1	۵. احـ						
13   51) - ωρ3 - υ3 - υ4κ - <b>3</b> - υ4κ - <b>3</b> - υ3 - υ4κ - <b>3</b> - υ3 - υ4κ - <b>3</b> - υ3 - υ4κ - <b>3</b> -	# 31-1 8/20/03 0855   Time     Received By	*   •	Relinquished By	Date	Time	Received	ed Bv
05. E1 80/02 10 June 1330	330 JUM C/ VA	5		+ +			
3		6					
Contact Information	_ 2	Preservative:	Comments/Special Instr	Instructions:			MSAI Use
mate 28.52	Rush*	2 · HNO <sub>3</sub> 3 - H <sub>2</sub> SO <sub>4</sub> 4 · Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 5 · HC <sup>1</sup>					100 1888.0
Fax: 208-528-8714	*RUSH TAT is subject to MSAI approval and surcharges will apply. ALL TAT's are based on WORKING days. Samples received after 4 on PM.	5 - NaOH 6 - NaOH/ZnaC					282
~	will not be processed until the next business day.	8 - Other					

### **Mountain States Analytical, LLC**

### Sample Receipt Checklist

Client Name: _ Carrier: _	North Wind			Work Order No. Carrier Number:	0308154
☐ Hand delivered, no	cooler	☐ Hand delivered	, sample(s) taken out at re	ceiving counter	
Ludlum Mo Smear Resu	del 3 Serial # ults: <b>Cooler</b> : α	Ludlι /β		al # /β Sample:	<b>ALARA:</b> α/β <b>s:</b> α/β
Cooler Number/ID Condition of Shipping Cooler Sealed (taped)	Container: Good	<b>Z</b> Í Fair □	Radioactivity Reading (if r Damaged (explain) plicable Q PID Reading		
Coolant: Idstate of Coolant: Fhermometer ID:	Intact □ ce <b>Ø</b> Blue Ice	I Bróken □ Seal Ñi : □ None □	umber:		
Packing Description:	sample contain	ness weapped in l	oubble wap inside a c	cooled_	
Chain-Of-Custo COC Present: COC Number(s): COC signed (relinquist COC agrees with sam Notes:	hed and received ple labels:	Yes <b>2</b> 27 Yes <b>2</b> Yes <b>2</b>	'રૂપુયું No □ Not Applicable		
Sample Informa Samples included in co	ooler: <u>411-57</u> 511-59 511-4 511-4		511-WPZ-03 -CH	1R-81-1 511-W R-A1-1 5K-L 1R-A2-1	P3-03-CHR-A1~1 P3-03-CHR-A2-1 P3-03-CHR-B1-1
Custody Seals Present	t:	Yes 1/2 No 🗅 Intact 1/2 Broken	Not Applicable  Oth Seal Number(s)		
Sample containers into Samples in proper con Sufficient sample volu All samples received in	ntainers: ime:	Yes Zi No Ci Yes Zi No Ci Yes Zi No Ci Yes Zi No Ci	<del></del>	<del></del>	·
Water – VOA's have zo Pre-preserved Notes:	d with HCl: 🗅	•	Not Applicable  with Na2S2O3:	Non-Preserved: 🗅	
Water - pH acceptable HNO <sub>3</sub> =	e upon receipt: Y H <sub>2</sub> SO <sub>4</sub> =	es 🗆 Adjusted	d (see comments below) NaOH =	Not Applicable Zi ZnAC /NaOH =	HCL =
	<u> </u>	H <sub>2</sub> SO <sub>4</sub> Na <sub>2</sub> SO <sub>2</sub> O <sub>3</sub>	Oth	OH er	
Cooler Contents Ins	spected & Verif	ied By:	36.63 Tim		
1					



### CH 217789B

#### FOR INTERNAL USE ONLY: Normal Profile ☐ X-Profile ☐ One Time Waste ☐ Repeat Waste

Waste Material Profile Sheet

For Y-Profile only	th 617_390_3581	Profile Number	sh <u>2177898</u>		
A. GENERAL I GENERATOR EPA					
GENERATOR CO	DE (Assigned by	Clean Harbors	GENERATOR NAME:_Tooele Arr	ny Depot	
ADDRESS: SJMT	E-CS-EO Buildin	ng 8	CITY_TooeleS	TATE <u>ut</u> zi	P 84074
GENERATOR TE	CHNICAL CONT	ACT: Larry McFarland	PHONE: (435)	833-3504	
CUSTOMER COD	E (Assigned by	Clean Harbors)	CUSTOMER NAME: North Wind	Inc. attn: Ara	n Armstrong
l .			CITY Idaho Falls STATE	<u>ID</u> ZIP	83402
	-				
B. WASTE DES Common Name of					
Process Generation	g Waste: Reme	diation of SWMU 11 Laundry/Sewage Pon	ds and Waste Pile Areas		
Year and the second					
Process Generati (check one) If spill, ori	gin of spilled materia	Source of Waste: (check one)	Other Process Information (chack all that apply)	ation:	
cyanides are used Wood preservation Inorganic pigment Organic chemical Pesticide producti Explosives product Explosives product Primary copper pro Primary lead produ Primary Jinc produ Primary Aluminum Ferno alloy product Secondary lead sn Veterinary pharma Int formulation Coking	solvents saided solvents ent sludge from ching operations solutions or residue; deteaning baths wi in the process production production production production production in ition etion or finishing sduction solution iction production iction production iction	Other Process Informati (check all that apply)  Still bottoms Process Scrap Process Scrap Process development Out of date product Spent solvent waste Treatment residues Filter cake Degressing Exompt recyclable material Packaged consumer goods Off-spec chemical product Zinc, Al, or tin plating Anodizing Cleaning/stripping Wastewater treatment slude	Conversion coating Carbon steel plating Printed circuit mfg. Cyanide process Heat treating Separator sludge Over residue Catalyst waste Cantrifuged solids Condensate Air, steam or vacuum stri Emission control dust Acid leaching Dipping operations Chemical manufacturing Carbon Adsorption Inchreration or thermal tre Refining Drug mfg. Distillation Pesticide mfg. Reclamation Etiching of metals Bag house dust		
c. PHYSICAL P	ROPERTIES (a	t 25°C or 77°F)		- AND AND AND	
PHYSICAL STAT  Solid without free to powder  Monolithic Solid  Liquids with no sol	İquid	NUMBER OF PHASES/LAYERS  1 1 2 1 3  4 by volume (approx.)  TapMiddle Bottom	VISCOSITY (if liquid present)  Low (e.g. Water)  Medium (e.g. motor oil)  Hign (e.g. molasses)	brown	R
Liquid/solid Mixtur % free liquid % settled solid % total suspended Gas/Aerosol	9	ODOR  ☑ None or mild ☐ Strong	BOILING POINT (if liquid)  □ ≤ 100° F  □ > 100° F	MELTING  □ < 140 °  □ 140 0 2  ⊠ > 200 °	00 ° F
FLASH POINT    < 73 ° F    73 - 100 ° F    101 - 140 ° F    141 - 200 ° F    > 200 ° F	pH	SPECIFIC GRAVITY    < 0.8 (e.g.Gasoline)   0.8 - 1.0 (e.g. Ethanol)   1.0 (e.g. Water)   1.0-1.2 (e.g. Antifreeze)   > 1.2 (e.g. Methylene Chloride)	TOTAL ORGANIC CARBON (If liquid □ ≤ 1% □ 1-9 % □ ≥ 10%	zi)	BTU/LB    < 2000   2,000 5,000   5,000 10,000   >10,000
			VAPOR PRESSURE (for Hquids only)_		mπ/Hg



### CH 217789B

D.	COMPOSITION_	Must add up to a	t least 100%.	Include inert materials a	nd/or debris if applicable.	Actual percent or ra	ange is acceptable.)
80	1		98	to_ <u>100 wt</u> %			%
	ks, vegetation, past	ic sheeting, use	dPPE 0	_to 1 <u>_wt_</u> %			%
\$rti	all pieces of scrap n	netal, wood, glas	is0	to 1 wt %			%
		<u> </u>		%			%
				%			%
	heck if MSDS attach						
also ac	ONSTITUENTS → Attacr ≄eptable answers.	n any avallable analys	ns. Enter values	or ranges where known. For T	CLP values, BRL signifies belov	v regulatory isvel. None	e, unknown, and present ar
Are the	🖸 no besed spulsev est	Knowledge or 🛭	Testing?				
INOR	GANIC						
RCRA	REGULATED METALS	REGULATORY LEVEL (mg/f)	TCLP mg/i	TOTAL mg/l	OTHER METALS T	OTAL NON-N	METALS WT%
D004 D005 D006 D007 D007 D008 D009 D010	ARSENIC BARIUM CADMIUM CHROMIUM CR+6 LEAD MERCURY SELENIUM SILVER	5.0 100.0 1.0 5.0 5.0 0.2 1.0 5.0	0.085 0.931 0.0429 0.029 0.552 ND 0.086 0.0097		ALUMINUM ANTIMONY BERYLLIUM CALCIUM COPPER MAGNESIUM MOLYBDENUM MICKEL POTASSIUM SILICON SODIUM THALLIUM TIN VANADIUM ZINC	CYAN CYAN	MINE RINE RINE E PPM
	EANIC FILE COMPOUNDS  BENZENE CARBON TETRACHLOR CHLOROBENZENE CHLOROFORM 1,2-DICHLOROETHANE 1,1-DICHLOROETHYLE METHYLETHYL KETON TETRACHLOROETHYLE TRICHLOROETHYLENE VINYL CHLORIDE	100.0 6.0 0.5 NE 0.7 NE 200.0 ENE 0.7	TCLP mg/l None	TOTAL mg/l	SEMI-VOLATILE COMPOUND D023 o-CRESOL D024 m-CRESOL D025 p-CRESOL D026 CRESOL(TOTAL) D027 1,4-DICHLOROBENZ D030 2,4-DINITROTOLLIEN D032 HEXACHLOROBENZ D033 HEXACHLOROBENZ D034 MEXACHLOROBENZ D036 NITROBENZENE D037 PENTACHLOROPHED D041 2,4,5-TRICHLOROPHED D041 2,4,5-TRICHLOROPH	LEVEL (mg/l) 200.0 200.0 200.0 200.0 200.0 ENE 7.5 E 0.13 ENE 0.13 DIENE 0.5 NE 3.0 2.0 NOL 100.0 ENOL 400.0	TCLP TOTALNone
	CIDES AND HERBICIDES  ENDRIN LINDANE METHOXCHLOR TOXAPHENE 2.4-D 2.4.5-TP (SILVEX) CHLORODANE HEPTACHLOR (AND IT'S EPOXIDE)	REGULAROTY LEVEL (mg/l) 0.02 0.4 10.0 0.5 10.0 1.0 0.03 0.008	TCLP mg/i None	TOTAL mg/l	OTHER  PHENOL  TOTAL PETROLIUM HYDROL  PCB'S  NONE  SOPPM  FPCB'S ARE PRESENT  < 50 PPM, IS THE WASTE  REGULATED BY TSCA  40 CFR 7617  YES □ NO	CARBONS (solls only)  HOC'S  NONE  <	NonePPM Unknown PPM
WATE RADIO DIOXII OSHA	ER HAZARDS YES R REACTIVE  NACTIVE  REGULATED RCINEGENS	PESTICIDE HERBICIDE EXPLOSIVE SPONTANEO IGNITES WI		SHOCK SENSITIVE THERMALLY SENSITIVE INFECTIUS, PATHOGENI OR ETIOLOGICAL AGENI ASBESTOS	C, OXIDIZE	EGULATED SUBSTANC ER NG AGENT F THE ABOVE	YES E O

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SMOULD BE HANDLED? YES ON NO (If yes, explain)



CH 217789B

F. Y	RE N	GULATORY STATUS	
	_	JSEPA HAZARDOUS WASTE? (if Yes, list codes.) None	
		DO ANY GENERATOR STATE WASTE COADES APPLY? If YES, list state codes, None	
LIST ANY FEDERAL OR STATE WASTE CODES WHICH MAY VARY FROM SHIPMENT TO SHIPMENT: None			
		WILL THE DECISION TO VARY THESE WASTE CODES BE BASED ON IN KNOWLEDGE OR IN TESTING (check one).  IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE:	
		IN MONEED BLANCO ST MONEED CO.	
	M	IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 26?	
	K-M	THIS WASTE IS A: ☐ WASTEWATER ☑ NON WASTEWATER PER USEPA DEFINITION IN 40 CFR 288,2?	
	×	IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D011, D012-D017 NON WASTEWATERS, OR	
_		OR DOIS-DO43 APPLY, ARE THERE ANY UNDERLYING HAZARDOUS CONSTITUENTS (UHS'C) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?	
	×	DOES TREATMENT OF THIS WASTE GENERATE A FO06 OR F019 SLUDGE?	
	<b>X</b>	IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?	
ш		IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401	
	<b>%</b> 1	IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES? (IS THIS WASTE FROM A CHEMICAL MANUFACTURING, COKE BY-PRODUCT RECOVERY,	
_	E.M	OR PETROLEUM REFINERY PROCESS?)	
	⊠	DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS > 500 PPM?	
	8	DOES THIS WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE ≥ SKPA (.44 psis)?	
	Ø	DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN77 Kpa (11.2psia)?	
<u></u>		O.T. INFORMATION: List all shipping names that may be used. Attach additional page if necessary.	
D.O.T SHIPPING NAME, Non-RCRA Regulated Solid (Soil)			
D,O,	ιψη	DOT HAZARD CLASS:	
		PACKING GROUP(Circle 1) I II HAZARD ZONE (Circle 1) A B C D	
		S SHIPPING NAME VARY? Y X N IF YES, WILL ASSIGNMENT OF PROPER SHIPPING NAME BE BASED ON KNOWLEDGE OR TESTING? (check one)	
4	IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE:		
H. TRANSPORTATION REQUIREMENTS ESTIMATED SHIPMENT FREQUENCY:   ONE TIME   WEEKLY   SEMI-MONTHLY   MONTHLY   QUARTERLY   OTHER			
□ BULK LIQUID □ CONTAINERIZED			
GALLONS/SHIPMENT: GAL _APX 22_TON PER SHIPMENTCONTAINERS/SHIPMENT			
		TANKS: TANK SIZEGAL STORAGE CAPACITYTON/YD STORAGE CAPACITY:CONTAINERS DRUMS VEHICLE TYPE; CONTAINER TYPE:	
_	V	HICLE TYPE: ☑ DUMP TRAILER ☐ CUBIC YARD BOX	
□VAC TRUCK □ROLL OFF BOX □PALLET □TANK TRUCK □INTERMODAL ROLL OFF BOX □TOTE TANK			
□RAILROAD TANK CAR □CUSCO/VACTOR □DRUMS SIZE:		DAD TANK CAR CUSCONACTOR DRUMS SIZE:	
CHECK COMPATIBLE STORAGE MATERIALS: DOTHER CONTAINER MATERIAL:			
TRUBBER LINED TIBERGLASS LINED TIBER		R LINED FIBERGLASS LINED FIBER	
	THE	R □PLASTIC	
_	c	AMPLE STATUS	
REP		ENTATIVE SAMPLE HAS BEEN SUPPLIES.  YES NO SAMPLED BY DATE SAMPLED	
J.		ECIFIC DISPOSAL RESTRICTION OR REQUESTS:	
	ŚF	ECIAL WASTE HANDLING REQUIREMENTS:	
		THER COMMENTS OR REQUESTS:	
J.		ENNIAL/ANNUAL REPORTING INFORMATION.  BIC CODE SOURCE CODE FORM CODE ORIGIN CODE	
	-	IIC CODE FORM CODE ORIGIN CODE	
		GENERATOR'S CERTIFICATION	
l he	I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples		
sub	submitted are representative of the actual waste. If clean Harbors discovers a discrepancy during the approval process. Generator grants Clean		
Harbors the authority to amen the profile, as Clean Harbors deems necessary, to reflect the discrepancy.			
Δ ; Ι'	THO	RIZED SIGNATURE NAME (PRINT) TITLE DATE	
~0	1110	RIZED SIGNATURE NAME (PRINT) TITLE DATE	
	2	050 10 0150 11 0010 011	
	/14	LOCI) Keyns 66 [1/erle ] Keyns 165 En) tot Spic 9/29/03	
	FOR CLEAN HARBORS USE ONLY		
Cł	ii RE	PRESENTATIVE COMPLETING ROFILE;	



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4001

Quantity:

56,060

C5,K6,7

Date:

10/15/03

Disposal Location:

/ Litah and that such treatment

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CD-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4002

Quantity:

66,640

Date:

10/15/03

Disposal Location:

C5,K6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT

84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#

UT3213820894

Manifest:

N4003

Quantity:

40,760

Date:

10/15/03

Disposal Location: C5,E6,7

has been disposed of at the Grassy Mountain Facility, located in Toocle County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Loud Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest:

N4004

Quantity:

63,980

Date:

10/15/03

Disposal Location:

C5,K6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4005

Quantity:

30,480

Date:

10/15/03

Disposal Location.

C5,E6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4006

Quantity:

42,520

Date:

10/17/03

Disposal Location:

C5,E7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

TOOELE ARMY DEPOT Generator:

EPA ID#:

UT3213820894

Manifest:

N4007

Quantity:

57,140

Date:

10/16/03

Disposal Location: C5,C2,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4008

Quantity:

58,000

Date:

10/16/03

Disposal Location:

C5,C2,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest:

N4009

Quantity:

41,320

Date:

10/17/03

Disposal Location:

C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Land Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

**TOOELE ARMY DEPOT** 

EPA ID#:

UT3213820894

Manifest:

N4010

Quantity:

47,720

Date:

10/17/03

Disposal Location:

C5,B4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Land Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4011

Quantity:

54,140

Date:

10/16/03

Disposal Location:

C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



**TOOELE ARMY DEPOT** LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT EPA ID#: UT3213820894

Manifest:

N4012

Quantity:

54,200

Date:

10/16/03

Disposal Location: C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4013

Quantity:

52,520

Date:

10/16/03

Disposal Location: C5,B3,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4014

Quantity:

56,060

Date:

10/16/03

Disposal Location:

C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

ŬΥ 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT EPA ID#: UT3213820894

Manifest:

N4015

Quantity:

26,480

Date:

10/17/03

Disposal Location: C5,A4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4016

Quantity:

59,360

Date:

10/16/03

Disposal Location:

C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest:

N4017

Quantity:

46,020

C5,B4,6

Date:

10/16/03

Disposal Location:

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

ŬΤ 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOBLE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4018

Quantity:

58,020

Date:

10/16/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4019

Quantity:

48,960

Date:

10/16/03

Disposal Location:

C5,B5,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TO

TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest:

N4020

Quantity: 29,560

Date:

10/17/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

John Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#; UT3213820894

Manifest:

N4021

Quantity:

57,960

Date:

10/17/03

Disposal Location:

C5,E7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

ŬΤ

84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOBLE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4022

Quantity:

26,800

Date:

10/17/03

Disposal Location: C5,F7,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4023

Quantity:

29,100

Date:

10/20/03

Disposal Location:

C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator; TOOELE ARMY DEPOT

EPA ID#

UT3213820894

Manifest:

N4024

Quantity:

28,500

Date:

10/20/03

Disposal Location:

C5,A2,7

has been disposed of at the Grassy Mountain Facility, located in Topele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4025

Quantity:

55,560

Date:

10/20/03

Disposal Location:

C5,B4,5

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4026

Quantity:

66,540

Date:

10/20/03

Disposal Location:

C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Toocle County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Land Mosson



**TOOELE ARMY DEPOT** LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT EPA ID#: UT3213820894

Manifest:

N4027

Quantity:

28,760

Date:

10/21/03

Disposal Location: C5,C4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4028

Quantity:

55,540

Date:

10/20/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND \$JMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator;

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4029

Quantity:

26,660

Date:

10/22/03

Disposal Location: C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

I Masson



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4030

Quantity:

44,580

Date:

10/20/03

Disposal Location:

C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Toocle County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT323820894

Manifest:

N4031

Quantity:

48,240

Date:

10/20/03

Disposal Location:

C5,A4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4032

Quantity:

27,700

Date:

10/20/03

Disposal Location:

C5,A4,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4033

Quantity:

27,840

Date:

10/21/03

Disposal Location:

C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4034

Quantity:

50,620

Date:

10/20/03

Disposal Location: C5,A2,6

has been disposed of at the Grassy Mountain Facility, located in Toocle County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

> Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator: TOOELE ARMY DEPOT

EPA ID#: UT3213820894

Manifest: N4035

Quantity: 63,420

Date: 10/21/03

Disposal Location: C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4036

Quantity:

56,620

Date:

10/20/03

Disposal Location:

C5,B4,6

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Lauret Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4037

Quantity:

23,560

Date:

10/21/03

Disposal Location:

C5,B6,3

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

Dan & Mosson



TOOELE ARMY DEPOT LARRY MCFARLAND SIMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

TOOELE ARMY DEPOT

EPA ID#:

UT3213820894

Manifest:

N4038

Quantity:

38,660

Date:

10/22/03

Disposal Location:

C5,B5,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748



TOOELE ARMY DEPOT LARRY MCFARLAND SJMT-CS-EO BLDG 8 TOOELE

UT 84074

Clean Harbors Grassy Mountain Facility, an Oklahoma corporation duly permitted and operating under the approval of the Utah State Department of Environmental Quality does hereby certify that the hazardous or non-hazardous waste of

Generator:

**TOOELE ARMY DEPOT** 

EPA ID#:

UT3213820894

Manifest:

N4039

Quantity:

55,040

Date:

10/21/03

Disposal Location:

C5,M6,7

has been disposed of at the Grassy Mountain Facility, located in Tooele County, Utah and that such treatment, neutralization and disposal has been accomplished in accordance with all applicable rules and regulations of the State of Utah and the U.S. EPA.

Clean Harbors Grassy Mountain, LLC Grassy Mountain Facility EPA ID # UTD9913001748

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	NON-HAZARDOUS 1. Generator's U	US EPA ID No. Manifest Doc. No. A. 3. 8. 2. 0. 8. 9. 4	2. Page 1 of <b>1</b>			
<b></b>	3. Generator's Name and Mailing Address TOOELE Army Depot SJMT-CS-EO Bldg 8 Attn: Larry M Tooele, UT 84074 4. Generator's Phone (435-)833-3504	dm N4001				
	5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number   C. A. T. 0. 0. 0. 6. 2. 4. 2. 4. 7	A. Transporter's 877–800	Phone -5111	,	
	7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's	Phone		
	9. Designated Facility Name and Site Address Clean Harbors Grassy Mountain, LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 of Clive, UT 84029	10. US EPA ID Number  Ef I-80  [U.T.D. 9.9.1.3.0.1.7.4.8	C. Facility's Phor		0	
	11. Waste Shipping Name and Description	0,1,0,0,0,1,1,0	12. Co	ntainers	13. Total	14. Unit Wt/Vol
	a NON REGULATED MARKERIAL, NONE, NONE		No.	Туре	Quantity Est.	VVVVOI
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A T O R	c	•.				
	d.			-		
OWNER CONTROL	D. Additional Descriptions for Materials Listed Above			es for Wa	stes Listed Above	
	11a. CH217789B		L. Flanding Code	33 IOI 114		
O New York Control of the Control of		U51530(	Hen			
	15. Special Handling Instructions and Additional Information  Emergency Telephone Number: Tooele A	army Depot 435-833-3504	, (			
	Truck #: 605 Container #:	3042			j	
	16. GENERATOR'S CERTIFICATION: I certify the materials described at	pove on this manifest are not subject to federal regula	itions for reporting pr	oper dispo	sal of Hazardous Was	ite.
¥	Printed/Typed Name  CARRY MCFARLAND	Signature Kary M. Fare	land		V O V 4	Year 03
TRANS	17. Transporter 1 Acknowledgement of Receipt of Materials  Frinted/Typed Name  OSE FOR MP	Signature	wit		Month Day,	Year
ANSPORTER	18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name	Signature			Month Day	Year
R	19. Discrepancy Indication Space					
F A C					1	
LLT	20. Facility Owner or Operator: Certification of receipt of waste material	Is covered by this manifest except as noted in Ite	em 19.	002	1000	
Ý	Printed/Typed Name	Signature OUDD	All		Month Day	13
	ted by J. J. KELLER & ASSOCIATES, INC.	1		12-	BLS-C6 Rev.	12/98

				-				
	NON-HAZAR OUT 1. Generator's US	SEPAID No. 3 8 2 0 8 9 4	Manifest Doc. No.	2. Page of 1	1	4		
A	3. Generator's Name and Mailing Address	3020094		<del>                                     </del>				
	Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry M	cFarland						:
	4. Toppele ITT (84074 435) 833–3504							
$\parallel$	5. Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPAID 1 CATOOO 6			sporter's 1 77–80		11	
	7. Transporter 2 Company Name	8. US EPA ID I			sporter's			
	Designated Facility Name and Site Address	10. US EPA ID	Number	C. Facil	ity's Phon	e		
	Clean Harbors Grassy Mountain, ILC. 3 Mi. E 7 Mi. N of Knolls Exit 41 of							
$\parallel$	Clive, UT 84029	U. T. D. 9. 9. 1. 3	3. 0. 1. 7. 4. 8	80	1-323	-890	0	
$\parallel$	11. Waste Shipping Name and Description		,		12. Cor	tainers	13. Total	14. Unit
	N				No.	Туре	Quantity	WtV
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	d.	CR	H					_
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	D. Additional Descriptions for Materials Listed Above	OFFG		E. Hand	lling Code	s for W	astes Listed Abov	re
	11a. CH217789B							
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele A	rmy Depot 435						
		ing Depot 433	,-033-3304					
	Truck #: 572 Container #: 3	040						
	GENERATOR'S CERTIFICATION: Londific the molecule decoded	mus on this monifoct are and	white to federal recut	ations (	nortice and	nor dia-	ceal of Harries	Morte
	16. GENERATOR'S CERTIFICATION: I certify the materials described about Printed/Typed Name	Signature	A CONTRACTOR OF THE CONTRACTOR	autors for re	pointg-pro	and disb		ay Yea
<b>*</b>	17. Transporter 1 Acknowledgement of Receipt of Materials	day:	mstal	and	<u>_</u>		101	40
TRANSPORTER	Fired/Typed Name	Signature -	0	0			Month L	lay Ye
S P O	18. Transporter 2 Acknowledgement of Receipt of Materials	- CV	iard	02-	<u></u>		1/011	70
F	Printed/Typed Name	Signature					Month L	Pay Yes
$\overline{}$	19. Discrepancy Indication Space							<u> </u>
F								
FACI						,		
L	20. Facility Owner or Operator: Certification of receipt of waste materials	s covered by this manifest	except as noted in It	tep 19.	// 7	20°2	00 40	9
Y	Printent yord Name	Signature	1/11	[]	11 2		00 400 Month 1 X 0 X	ay Yes
	/INT home former		Holy C	fr			YOX	562
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MAN TO MACHINE PROPERTY.		NON-HAZARDOUS	1. Generator's U		3 9 4	Manifest Doc. N					
<b>A</b>		Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-FO Bldg 8 Attn: Tooele, Utah, 84074 Generator's Phone (435 )833-3504	: Larry McI	Farland							
	5	. Transporter 1 Company Name MP Environmental Services,	Twa		EPA ID N			nsporter's P			
TATE OF STREET	7	Transporter 2 Company Name	, Inc.		EPA ID N	.2 .4 .2 .4 .7 lumber		7-800- nsporter's F			
accession.	L			<u> </u>		<u></u>					
	9	Designated Facility Name and Site Address Clean Harbors Grassy Mount 3 Mi. E 7 Mi. N of Knolls Clive, Utah, 84029	tain, LLC Exit 41 of		EPA ID N			1–323–			
200000000000000000000000000000000000000	1	Waste Shipping Name and Description		<u> </u>				12. Cont	ainers	13. Total	14. Unit
	L							No.	Туре	Quantity	Wt/Vol
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(Company)		Emergency Telephone Number	: 1,00eTe	Army Bepo	DT 435	-833-3504	<del>\$</del>				
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NO SOCIETA POR LA PORTE DE LA		Truck #: <u>579</u> Conta	iner#: _	7576_							
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260000000000000000000000000000000000000	1	6. GENERATOR'S CERTIFICATION: I certify the mi	aterials described ab-			bject to federal reg	ulations for I	reporting prop	er dispo		
A		Printed/Typed Name  LARRY MCFARLANO		Signatu		mefa	La	nel		Month Day	> Year > 0.3
T	1	7. Transporter 1 Acknowledgement of Receipt of Ma	aterials								
υZΑ		Printed/Typed Name		Signatu	re / /			· Jac		Month Day	Year
PO	11	8. Transporter 2 Acknowledgement of Receipt of Ma	aterials			1/		•		1/(_/1_/_	<u> </u>
TRANSPORTER		Printed/Typed Name		Signatu	re	,				Month Day	Year
n n	+-	9. Discrepancy Indication Space					,				
FACI							, Pa		,		
LLTY	2	Facility Owner or Operator: Certification of receip	t of waste materials	s covered by this	manifest e	xcept as noted in	Item 19.	2	002	109627	
9 ·		,									

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	O PARTICIPATION OF THE PARTICI	NON-HAZARDOUS 1. Generator's U	S EPA ID No. Manifest Doc. No. 3 .8 .2 .0 .8 .9 .4 W.4.0.04		.			
		Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg. 8 Attn: Larry Tooele, UT 84074 Generator's Phone (435) 833-3504	McFarland					
	5.	Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID Number C A T 0 0 0 6 2 4 2 4 7		nsporter's P			
	7.	Transporter 2 Company Name	8. US EPA ID Number	<b></b>	nsporter's F			
	9.	Designated Facility Name and Site Address Clean Harbors Crassy Mountain, LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 of	10. US EPA ID Number	C. Fac	ility's Phone	•		
		Clive, UT 84029	UTD991301748	32	£,0,	301–	323-8900	
	11	. Waste Shipping Name and Description			12. Cont	ainers Type	13. Total Quantity	14. Unit Wt/Vol
	a.	NON REGULATED MATERIAL, NONE, NONE	${f \epsilon}$		140.	Турс	Est.	440 401
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AT	c.							
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	d.							
	D.	Additional Descriptions for Materials Listed Above		E Hand	dling Codes	for Wa	stes Listed Above	<u> </u>
		11a. CH217789B			-mig couce	10. 110	5100 210104 710010	
§	1	11a. C1217703D						
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		. Special Handling Instructions and Additional Information	U514923					
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		Special Handling Instructions and Additional Information  Francy Telephone Number: Tooele	Army Depot 435-833-3 <b>2</b> 04		11-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-			
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		Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container	Army Depot 435-833-3 <b>2</b> 04					
	16	Special Handling Instructions and Additional Information  Friendly Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described above the printed/Typed Name	Army Depot 435–833–3 <b>2</b> 04 #:	tions for re	eporting prop	er dispo	sal of Hazardous Was	
<b>*</b>	16	Special Handling Instructions and Additional Information  Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described about the printed/Typed Name  CARRY MCFARLAWO	Army Depot 435-833-3 <b>2</b> 04	tions for re	eporting prop	er dispo:		ste.
<b>→</b> TR4	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described above the printed/Typed Name  LARRY MCFALLAWO  Transporter 1 Acknowledgement of Receipt of Materials	Army Depot 435-833-3204 #: 304/ ove on this manifest are not subject to federal regula Signature Signature Tany M. Land	tions for re	eporting prop	er dispo		Year 03
	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: I certify the materials described about the printed/Typed Name  PRINTED METALLAND  Transporter 1 Acknowledgement of Receipt of Materials  Brinted/Typed Name	Army Depot 435–833–3 <b>2</b> 04 #:	tions for re	eporting prop	er dispo:	Month Day    0    5	
	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described above the printed/Typed Name  LARRY MCFALLAWO  Transporter 1 Acknowledgement of Receipt of Materials	Army Depot 435-833-3204 #: 304/ ove on this manifest are not subject to federal regula Signature Signature Tany M. Land	tions for re	eporting prop	er dispo	Month Day    0    5	Year O3
→ TRACADACETER	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: I certify the materials described above the second of the second o	Army Depot 435-833-3204  #: 304/  ove on this manifest are not subject to federal regula  Signature  Signature  Signature  Multiple Many  Mul	tions for re	eporting prop	er dispo	Month Day    O   1.5	Year O.3
RAZWPORTER F	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: I certify the materials described ab  Printed/Typed Name  ARRY MCFARLAWO  Transporter 1 Acknowledgement of Receipt of Materials  Brinted/Typed Name  ARY MCFARLAWO  Transporter 2 Acknowledgement of Receipt of Materials	Army Depot 435-833-3204  #: 304/  ove on this manifest are not subject to federal regula  Signature  Signature  Signature  Multiple Many  Mul	tions for re	eporting prop	er dispo	Month Day    O   1.5	Year O.3
RAZWPORTER FACIL	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: I certify the materials described above the second of the second o	Army Depot 435-833-3204  #: 304/  ove on this manifest are not subject to federal regula  Signature  Signature  Signature  Signature  Signature	tions for re			Month Day  Month Day  Month Day  Month Day	Year O.3
RAZWPORTER FAC-	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described about the printed/Typed Name  ARRY MCFARLAND  Transporter 1 Acknowledgement of Receipt of Materials  Brinted/Typed Name  Transporter 2 Acknowledgement of Receipt of Materials  Printed/Typed Name  Discrepancy Indication Space	Army Depot 435–833–3204  #: 304/  ove on this manifest are not subject to federal regula  Signature  Signature  Signature  Signature  Signature  Signature  All  Signature	tions for re	2003		Month Day  Month Day  Month Day  Month Day	Year O.3 Year B.3
RAZWPORTER FAC-1-F	16	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele  Truck #: 57/ Container #  GENERATOR'S CERTIFICATION: 1 certify the materials described about the printed/Typed Name  ARRY MCFARLAND  Transporter 1 Acknowledgement of Receipt of Materials  Brinted/Typed Name  Transporter 2 Acknowledgement of Receipt of Materials  Printed/Typed Name  Discrepancy Indication Space	Army Depot 435-833-3204  #: 304/  ove on this manifest are not subject to federal regula  Signature  Signature  Signature  Signature  Signature	tions for re			Month Day  Month Day  Month Day  Month Day	Year O.3 Year B.3

Neenah, WI 54957-0368

12-BLS-C6 Rev. 12/98 **TRANSPORTER #1** 

Ple (Fo	ase i	rint or type signed for use on slite (12-pitch) typewriter.)						
Ì	God Galley	NON-HAZARDOUS 1. Generator's U	S EPA ID No. Manifest Doc. No. 3. 8. 2. 0. 8. 9. 4 W. F. O. O. 5	2. Page of	l l			
<b>A</b>	3.	Generator's Name and Mailing Address TOOCLE ATTRY DEPOT SJMTE-CS-EO Bldg 8 Attn: Larry Toocle, UT 84074 Generator's Phone (435)833-3504						
	5.	Transporter 1 Company Name	6. US EPA ID Number	A. Tran	nsporter's P		E111	
	7.	MP Environmental Services, Inc. Transporter 2 Company Name	C. A. T. 0. 0. 0. 6. 2. 4. 2. 4. 7  8. US EPA ID Number	B. Tran	877– nsporter's F	<del></del>	5111	
			<u> </u>					
	9.	Designated Facility Name and Site Address  Clean Harbors Grassy Mountain LLC.  3 Mi. E 7 Mi. N of Knolss Exit 41 o  Clive, UT 84029	10. US EPA ID Number off I-80  U.T.D.9.9.1.3.0.1.7.4.8	C. Faci	lity's Phone		8900	
	11	Waste Shipping Name and Description	0.1.0.5.5.1.5.0.1.7.4.0		12. Cont		13.	14.
	L	. Waste Gripping Name and Description			No.	Туре	Total Quantity	Unit Wt/Vol
	a.	NON REGULATED MATERIAL, NONE, NONE		!	0 0 1	KM	Est.	P
l G	b.						//	
GEZ								
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T O R								
Î	d.					<u> </u>		<del> </del>
	<u></u>	Additional Descriptions for Materials Listed Above		E. Hand	dling Codes	for Wa	stes Listed Above	<u> </u>
	-	11a. CH217789B	1 /2					
		U 51490C				A.		
	15	Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele	Army Depot (435) 833-350	4			. J.C.	
		Truck# 575 Container# 45	595					
							1	
		U514900					1	
	18	GENERATOR'S CERTIFICATION: I certify the materials described ab	pove on this manifest are not subject to federal regulat	ions for re	eparting prop	er dispo	sal of Hazardous Was	ste.
$\left  \downarrow \right $		Printed/Typed Name Larry mc/farland	Signature day me fast	-an	مرك		Month Day	Year P 3
T R A	17	Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name	Signatura A Marka		<i>[</i>		Month Day	Year
TRANSPORTER		Printed/Typed Name NONTY MONSERRET	MAD Man	u.V			1015	قيط
OR	18	Transporter 2 Acknowledgement of Receipt of Materials	/					
ĖR		Printed/Typed Name	Signature				Month Day	Year
	19	Discrepancy Indication Space						
FACI								
L I T	20	Facility Owner or Operator: Certification of receipt of waste materials	s covered by this manifest except as noted in Ite	m 19.	200	300	A023	
Y		Printed Typed Name UST A S	Signature / WWW Males	tas			Month Day	Vear

-		<del></del>			.,,				
	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID U T 3 2 1 3 8	l "-	nifest Doc. No. 4:0.06	2. Page	'			
<b>A</b>	3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg *8 Tooele UT 84074 4. Generator's Prione (435) 833-356	Attn: Larry McE	4						
	5. Transporter 1 Company Name	6.	US EPA ID Numb	er	A. Trans	porter's P	hone		
	MP Enviornmental Service 7. Transporter 2 Company Name	es, Inc.   C A . 8. 	T- 0- 0- 0- 6- 2- US EPA ID Numb		B. Trans	877-8 porter's F	00-5 Phone	111	
	Designated Facility Name and Site Address     Clean Harbors Grassy Mou     Mi. E 7 Mi N of Knolls	Exit 41 off I-			C. Facili				
	Clive, UT 84029	U, T.	D. 9. 9. 1. 3. 0.	1,7.4.8	<u>L</u>	801–3			
	11. Waste Shipping Name and Description				.	12. Cont No.	tainers   Type	13. Total Quantity	14. Unit Wt/Vol
	a.					140.	Туре		***************************************
	NON REGULATED MATERIAL,	NONE, NONE				0- <b>0</b> - 1	C.M	Est. 000	Р
GENERATOR	b.								
RATO	C.								
Ř							<u>  ·</u>		
	d.								
	D. Additional Descriptions for Materials Listed Abo     11a. CH217789B	ve	CR SY FS V	2	E. Handi	ing Code	s for Wa	stes Listed Above	
	15. Special Handling Instructions and Additional Inf Emergency Telephone Numb  Truck# <u>580</u> Cont		y Depoit (435	) 833–35	504				
	18. GENERATOR'S CERTIFICATION: I certify the	naterials described above on th	is manifest are not subject	to federal regula	ations for re	porting pro	per dispo	sal of Hazardous Wa	ste.
	Printed/Typed Name Larry McFarland	/	Signature	مر سیا	0-		0	Month Day	Year
Ţ	17. Transporter 1 Acknowledgement of Receipt of	<del></del>	<u> </u>	<u> </u>				12.2	
TRANSPORTER	Printed/Typed/Name/		Signature	Hele	w		*	Month Day	Year
ОП-но	18. Transporter 2 Acknowledgement of Receipt of Normal Printed/Typed Name	<i>N</i> aterials	Signature					Month Day	Year
FACI	19. Discrepancy Indication Space								
L	20. Facility Owner or Operator: Certification of rece	ipt of waste materials covere	d by this manifest excep	ot as noted in It	em 19.	21	19	60467	8
Ŷ	Printed/Typed Name	V Fields	Signature	week	OV	CC	10	Month Day	Year

ORIGINAL - RETURN TO GENERATOR

		NON-HAZARDOUS 1. General 's US' WASTE MANIFEST 1. Tr. 3. 2			anifest Doc. No. 1.4007	2. Page of	1			
4	3.	10 1 3 2	3.8.2.0	· 8· 9· 4 P	1.4.0.07		<u></u>			
		Generator's Name and Malling Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larr	v McFar	hael						
		Tooele, UT 84074	y ricrat	Lana						
П				10 FD4 ID 11	<u>.                                    </u>	. 7		<u></u>		
П	5.	1		JS EPA ID Nun	· 4 · 2 · 4 · 7	i .	sporter's F		11	
П	7.			JS EPA ID Nun			877-80 sporter's		11	<del></del> -
			<u> </u>	<u> </u>						
П	9.	Designated Facility Name and Site Address Clean Harbors Grassy Mountain, LLC		JS EPA ID Nun	nber	C. Faci	lity's Phon	<b>3</b>		
П		3 MI. E 7 Mi N of Knolls Exit off								
				9,1,3,0	1,7,4,8	8	01-323	8-890	0	
li	11.	Waste Shipping Name and Description					12. Con	tainers	13. Total	14. Unit
							No.	Туре	Quantity	₩ŧ⁄Vol
	a.								est.	
Н		NON REGULATED MATERIAL, NONE, NONE	}		•		0. 0. 1	07	59.000	) P
I G	b.									
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GENERATOR							· ·	<u> </u>		-
A	c.									
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	d.							24		
		CR		7				7		
П	n	Additional Descriptions for Materials Listed Above	7/47			F Han	dling Code	e for Wa	stes Listed Above	
	υ.	11a. CH217789B	HIV			L. Hair	ding Code	3 101 110	IOIGO LISIGU ADOVI	•
		OFF	C							
				لـــ						
П	15.	Special Handling Instructions and Additional Information			4051 000	2504			72 72 11 12 12 12 12 12 12 12 12 12 12 12 12	
		Emergency Telephone Number: Tooel Truck# 605 Contain		Depot (	435) 833-	-3504				
		Trucky 60°		2072						
		•								
Ш	16,	GENERATOR'S CERTIFICATION: 1 certify the materials described above			ct to federal regula	tions for r	eporting pro	per dispo	sal of Hazardous V	Vaste.
П		Printed/Typed Name	Sign		مر عدد	0	and	1	Month Da	y You 5 0.3
¥ į	17.	Transporter 1 Acknowledgement of Receipt of Materials		any	7-7-70		<del>2 2 2</del> 7		<u> // U 1/-</u>	<u> </u>
TRANSPORTER		Printed/Typed Name	Sign	ature		9//			Month Da	y Year
S	_{	JOSEPH SHINDER FORM		psyl		lue	<i>71</i> ——-		1601	502
O R	18.	Transporter 2 Acknowledgement of Receipt of Materials								
E		Printed/Typed Name	Sign	ature					Month De	ay Year   .
	19.	Discrepancy Indication Space								
F										
Ą	-		:							
FACILIT	20	Facility Owner or Operator: Certification of receipt of waste materials	covered by the	is manifest evo	ept as noted in It	em 19.		<u> </u>		
T					-F- 40 1.000 #1 10		200	<i>500</i> 4	4000	
*	1	Protect Typed Name	Sign	TUPE ( ) . A	Mana	h 'a			Month Da	y Year
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		WASTE MANIFEST U. T. 3. 2.1	S EPA ID No. . 3 . 8 . 2 . 0 . 8 . 9 . 4	Manifest Doc. No.	2. Pag	1				
1		Generator's Name and Malling Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry Tooele UT 84074 Generator's Phone (435) 833-3504	y McFarland			•				
	5.	Transporter 1 Company Name MP Environmental Services, Inc.	6. US EPA ID N C.A.T.0.0.0.6		A. Tra	nsporter's F		111		
	7.	Transporter 2 Company Name	8. US EPA ID N	lumber	B. Tra	sporter's				
	9.	Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of knolls Exit of:	10. US EPA ID N		C. Fac	ility's Phon			,	
		Clive, UT 84029	U.T.D.9.9.1.3	0 1 7 4 8		801-3				
	11.	Waste Shipping Name and Description	100			12. Con No.	tainers Type	13. Total Quantity		14, Unit Mt/Vol
	a.	NON REGULATED MATERIAL, NONE, NON	E			0.0.1	D.7	Est.		P
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GENERATOR	с.		***************************************				ļ ·			
R						· ·	<u> </u>		·	
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		Additional Descriptions for Materials Listed Above 11a. CH217789B	CR FS OFF	PM C	E. Har	dling Code	s for Wa	astes Listed Ab	DOVE	
	15.		le Army Depot		3504					,
		Truck# <u>572</u> Contain	er# <u>304</u> 6	<u> </u>						
	16.	GENERATOR'S CERTIFICATION: I certify the materials described at	pove on this manifest are not s	ubject to federal regul	ations for	reporting pro	per dispe	osał of Hazardou	is Wast	6.
<b>\</b>		Printed Typed Name Larry Matarland	Signature	mefan	lan			Month 10	Day 1.5	Year
TRANSPORTER	17.	Transporter 1 Acknowledgement of Receipt of Materials	Signature	0 8	<u>)</u>			Month	Day	Year <b>b</b> .3
P	18	Transporter 2 Acknowledgement of Receipt of Materials	THE COL	wex_C	×			10	139	و و
Ř T E R		Printed/Typed Name	Signature					Month	Day	Year
FAC	19.	Discrepancy Indication Space		,						
LIT	20.	Facility Owner or Operator: Certification of receipt of waste material	ls covered by this manifest	except as noted in I	tem 19.	200	300	4007		
Y		Priprodutypod Name ACSTAS	Signature	w Man	too			Month	Day	102

	NON-HAZARDOUS	1. Generator's US	EPA ID No.		est Doc. No.		1		* - 14	
+	WASTE MANIFEST	UT 3 2 1	3. 8. 2.	0-8-9-4 N.7	1009	of ,				
1	3. Generator's Name and Mailing Address Tooele Army Depot									
		Attn: Larr	ry McFa	rland		1				
11	4. Generator's Proche ( 435 833-35(	24								
	5. Transporter 1 Company Name		6.	US EPA ID Number		A. Tran	sропетs Pl	none		
	MP ENvironmental Service			0.0.0.6.2.4			77–800		1	
	7. Transporter 2 Company Name	- ,	8. I	US EPA ID Number		B. Tran	sporter's P	hone		
1	Designated Facility Name and Site Address		10.	US FPA ID Number	<i>.</i>	C Facil	ity's Phone			
	Clean Harbors Grassy Mo			oo Evinio Manibol			,			
	3 Mi. E 7 Mi. N of Knol								_	
	Clive, UT 84029		U. T. D.	9. 9. 1. 3. 0. 1	.7.4.8	8	01–323			
П	11. Waste Shipping Name and Description						12. Contr	ı	13. Total	14. Unit
11							No.	Type	Quantity	Wt/Vo
	a.								Est.	
	NON REGULATED MATERIAL,	, NONE, NONE	E				0.0.1	< r	32.00	P 0
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Ĩ	<b>c.</b>									
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11	d.		r		٦					
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$\ \cdot\ $	D. Additional Descriptions for Materials Listed Abo	ve		-s (\$\frac{1}{2}\)	<u></u>	E. Hand	fling Codes	for Wa	stes Listed Abo	ve
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П										
	15. Special Handling Instructions and Additional Inf		_							
	Emergency Telephone Nur	nber: Tooe.	le Army	Depot (435	6) 833–3	3504				
	Truck# 579 C	ontainer#	c 25	364D						
				2011						
	16. GENERATOR'S CERTIFICATION: 1 certify the	materials described abo	ove on this ma	nifest are not subject to	federal regula	tions for re	porting prop	er dispo	sal of Hazardous	Waste.
	Printed/Typed Name		Sign	nature	م به	n	0		/ Month	Day `Year
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Ř	17. Transporter 1 Acknowledgement of Receipt of I	vialenais	Sign	nature / //					Month	Day Year
S	Kelly Young			Kelly	2		7		101	1503
	18. Transporter 2 Acknowledgement of Receipt of I	Materials			7		-			
R			1.01-	nature					Month	Day Year
ORTE	Printed/Typed Name		Sign						1 . 1	
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	Printed/Typed Name		Sig			<del>,, -</del>			1 · 1.	<u> </u>
FACI	Printed/Typed Name  19. Discrepancy Indication Space									
FACILI	Printed/Typed Name	ipt of waste materials		his manifest except a	as noted in It	em 19.	2M	21	11.	
FACIL	Printed/Typed Name  19. Discrepancy Indication Space	ipt of waste materials	s covered by	his manifest except a	as noted in It	em 19.	200	30	Month	Day Year

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA U · T · 3 · 2 · 1 · 3 · 8		Manifest Doc. No.		∌ 1 			
A	3.	Generator's Name and Mailing Address Tooe Le Army Depot								
		SJMTE-CS-EO Bldg 8	Attn: Larry M	McFarland						
		General Street (UT 84074								
	5.	Transporter 1 Company Name 833-3504	0.	US EPA ID		A. Tra	sporter's F			
	7.	MP Environmental Service Transporter 2 Company Name	es, Inc. [C	ATOOO		B. Trai	877-8		111	
			<u>L.</u>		· · · · ·	<u> </u>				
	9.	Designated Facility Name and Site Address Clean Harbors Grassy Mc		US EPA ID	Number	C. Fac	ility's Phon	e		
		3 MI. E 7 Mi. N of Knol			2 2 4 7 4 7			2 22		
		Clive, UT 84029	Ų	T D 9 9 1	3 0 1 7 4 8		301–32			1 44
	11.	Waste Shipping Name and Description		*			12. Con No.	Type	13. Total Quantity	14. Unit Wt/Vol
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	n	Additional Descriptions for Materials Listed Above	Α	CR @	}	F Han	dling Code	s for Wa	stes Listed Above	1
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				OFFC						
	15	Special Handling Instructions and Additional Info	mation			<u> </u>				
	15.	Emergency Telephone Nun	ber: Tooele A	army Depot	(435) 833-3	504				
		Truck# 575 (	ontainer#	5231						
				,,01						
		and the second second								
	10	U515351								
	16.	GENERATOR'S CERTIFICATION: I certify the n Printed/Typed Name	laterials described above of	Signature	subject to federal regula	ations for	eporting pro	per dispo	sal of Hazardous W Month Day	
٧		LARRY MCFARLAND		dan	y MªFo	ul	and	0	110	50.3
R	17.	Transporter 1 Acknowledgement of Receipt of N Printed/Typed Name	aterials	Signatifica	ann	7			Month Day	y Year
TRANSPORTER		MONTY MONSERRE	-1	17/2	1)//6				1.01	6 P 3
Ř	18.	Transporter 2 Acknowledgement of Receipt of M	aterials							
ER		Printed/Typed Name		Signature					Month Day	y Year   .
	19.	Discrepancy Indication Space								
F										
A C			400							
L	20.	Facility Owner or Operator: Certification of receip	ot of waste materials cove	ered by this manifest	except as noted in It	ern 19.	2	100	30/04/18	31
Ÿ		Printed/Typed Name Rain 1	Tolda	Signature	m. Ant	2/10/1	1		Mgnth Day	Year
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П		NON-HAZARDOUS	1. Generator's US			Doc. No.	2. Page	31		- V	,
+	2	WASTE MANIFEST Generator's Name and Mailing Address	U. T. 3. 2. 1.	3.8.2.0.8.9	4 N.T.	0.7.7	of -	<u>L</u>			
1		Tooele Army Depot SJMTE-CS-EO Bldg 8	ttn: Larry	McFarland							
$\ \cdot\ $		Tooele UT 84074 Generator's Phone ( 435 833 3504				J#V41-11					
	5.	Transporter 1 Company Name MP Environmental Service	1	6. US EPA C.A.T.O.O.O	ID Number	17	A, Trar	nsporter's P 877 <b>–</b> 8		111	
1	7.	Transporter 2 Company Name			ID Number	2 .4 . /	B. Tran	nsporter's F			
	9.	Designated Facility Name and Site Address Clean Harbors Grassy Mou	ntain. LIC	10. US EP/	ID Number		C. Fac	lity's Phone	•		
П		3 Mi. E 7 Mi. N of Knoll									
11		Clive, UT 84029	i	UTD 9 9 1	3 0 1 7	7 4 8	<b>i</b> 8	801–32	3–89	00	
J	11.	Waste Shipping Name and Description					<u> </u>	12. Con	tainers	13. Total	14. Unit
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	D.	Additional Descriptions for Materials Listed Abov	Α				F Han	dling Code	s for W	stes Listed Above	<u> </u>
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	15.	Special Handling Instructions and Additional Info									
		Emergency Telephone Numb	er: Tooel	e Army Depo	t (435)	833-3	3504				
		Truck# _606	Containe	r# 310	0						
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П	16.	GENERATOR'S CERTIFICATION: I certify the m	aterials described abo		not subject to fe	deral regula	tions for	eporting pro	per disp		
		Printed/Typed Name  CRERY MCFARLAND		Signature	y me	ميون	0	1		Month Da	y Yea ら (0.)
7	17.	Transporter 1 Acknowledgement of Receipt of M	aterials	10,0	37.0	Van	A. M. Carrier	<u> </u>		17.011.	0 0.
TRANSPORTER		Printed/Typed Name		Signature			_			Month Da	
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P	18.	Transporter 2 Acknowledgement of Receipt of M	aterials	Si							
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	19.	Discrepancy Indication Space				v. <del></del>					
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ORIGINAL - RETURN TO GENERATOR

ORIGINAL -- RETURN TO GENERATOR

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		NON-HAZARDOUS 1. Generator's US EPA	ID No. Manifest Doc. No. 8. 2. 0. 8. 9. 4 W. + 0./ 3	2. Pag of	1			
<b>A</b>	3.	Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McFar Tooele, UT 84074 Generator's Phone ( 435) 833-3504	land					
	5.	Transporter 1 Company Name 6.	US EPA ID Number		nsporter's P			
	Ļ		T. 0. 0. 0. 6. 2. 4. 2. 4. 7		8 <b>77-</b> 80 nsporter's F		11	
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Transporter 2 Company Name 8.	US EPA ID Number	B. Irar	isponers F	rione		
	9.	Clean Harbors Grassy Mountian LLC	US EPA ID Number	C. Fac	ility's Phone	)		-
		3 Mi. E 7 Mi. N of Knolls Exit 41 off I Clive, UT 84029	[-80 [D]9]9]1]3]0]1]7]4]8		801–32	<b>3-</b> 89	00	
	1	. Waste Shipping Name and Description			12. Cont	ainers	13. Total	14. Unit
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	D	Additional Descriptions for Materials Listed Above 11a. CH217789B	•	E. Han	dling Codes	for Wa	stes Listed Above	
		THE CLETTIONS						
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	15	i. Special Handling Instructions and Additional Information  Emergency Telephone Number: Toole Army	Depot (435) 833-3504	ļ				
		Truck# <u>581</u> Continer# <u>3110</u>	<del></del>					
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	16	<ol> <li>GENERATOR'S CERTIFICATION: I certify the materials described above on the Printed/Typed Name</li> </ol>	his manifest are not subject to federal regula Signature	tions for r	eporting prop	er dispo	sal of Hazardous Was  Month Day	te. Year
V		LARRY MCFARLAND	Harry Mc Ford	- T- 7 -	-l		1 0 1:6	1/2
Ţ	17	7. Transporter 1 Acknowledgement of Receipt of Materials	100					
TRANSPORTER		Printed/Typed Name  VETT POY N (arnelius 5)	Signature	ma	lias		Month Day	Year 73
OR P	18	. Transporter 2 Acknowledgement of Receipt of Materials	0110					
ER		Printed/Typed Name	Signature				Month Day	Year
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LIT	20	Facility Owner or Operator: Certification of receipt of waste materials covered	ed by this manifest except as noted in Ite	7 <sup>19</sup> C:	3004	lili		
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$\perp$		WASTE MANIFEST	UT 3 2 1 3	3- 8- 2- 0- 8- 9- 4		of 4					
	4.	Tooele, UT 84074 Generator's Phone (435) 833-350	tn: Larry Mo		NHOIA						
	5.	Transporter 1 Company Name	6.	US EPA ID	Number	A. Tran	sporter's l	Phone			
		MP Environmental Services	, Inc. C	C-A-T-0-0-0-6	5 · 2 · 4 · 2 · 4 · 7		77-800		1		
	7.	Transporter 2 Company Name	8.	US EPA ID	Number	B. Tran	sporter's	Phone			
		Designated Facility Name and Site Address Clean Harbors Grassy Moun		). US EPA ID	Number	C. Facil	ity's Phon	ie			
Ш		3 Mi. E 7 Mi. N of Knolls							_		
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11	11.	Waste Shipping Name and Description					12. Cor	ntainers	13. Tota	ı	14. Unit
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11	D.	Additional Descriptions for Materials Listed Abov	6			E. Hand	lling Code	es for W	astes Listed	Above	
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		Special Handling Instructions and Additional Info									
	٠.	Emergency Telephone Numbe	r: Tooele A	Army Depot (4	135) 833-35	04					
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Y		Printed/Typed Name	Ky Field	Signature (	Bookers	0000	10		Month	Day	Yea

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<b>▲</b>	3. Generator's Name and Mailing Address Tooele Army Depot				ţ			
		tn: Larry McFa	rland					
	Tooele. UT, 84074	_						
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	5. Transporter 1 Company Name	6. I	US EPA ID N		A. Transport	er's Phone		
1	MP Environmental Services		T 0 0 0 0 6			<u>-800-51</u>	11	
	7. Transporter 2 Company Name	8. 1	US EPA ID I		B. Transport	ers Phone		
1	9. Designated Facility Name and Site Address	10.	US EPA ID I		C. Facility's	Phone		
Н	Clean Harbors Grassy Mour		00 Ct \(\pi\) 10 1	tunibet .	C. Facility 8	INII		
	3 Mi. E 7 Mi. N of Knolls		90					
Ш	Clive, UT 84029			·0·1·7·4·8	901	222 00	.00	
11	11. Waste Shipping Name and Description	IO-T	.D. 9. 9. 1.3	.0.1.7.4.8	12.	_323_89 Containers	13.	14.
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1	D. Additional Descriptions for Materials Listed Abo	NA	CR	$\overline{\mathcal{I}}$	E Handling	Codes for Wa	astes Listed Above	
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	15. Special Handling Instructions and Additional Inf							
	Emergency Telephone Number	r: Tooele Arm	y Depot (4)	35) 833–350	)4			
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	Truck# $531$ Conta	iner# <u>75</u>	7>					
1	16. GENERATOR'S CERTIFICATION: 1 certify the	materiale descriptori about *	his manifest are not a	high to fadous no	ations for tone at	na nassar die	seal of Hammon. 1	/neta ·
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+	17. Transporter 1 Acknowledgement of Receipt of		- 3	11			- 17 <del>- 17 '</del>	W. L
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	19. Discrepancy Indication Space		.3					
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**ORIGINAL - RETURN TO GENERATOR** 

		1. Generator's US		Manifest Doc. No.					,
	WASTE MANIFEST  3. Generator's Name and Malling Address	<u>UT321</u>	3 8 2 0 8 9 4	1 N.4.0.18	of 1			, 117-17-17-17-17-17-17-17-17-17-17-17-17-	
4	Tooele Army Depot								
		n: Larry	McFarland						
	4. Generator's Phone ( 435 833-3504				ļ				
$\parallel$	<ol> <li>Transporter 1 Company Name</li> <li>MP Environmental Services,</li> </ol>	Inc.	6. US EPA ID C. A. T. O. O. O.		A. Transpo		hone )–511	11	
1	7. Transporter 2 Company Name	2	8. US EPA ID		B. Transpo				
$\prod$			<u> </u>						
$\ $	Designated Facility Name and Site Address Classy Mount	ain LLC.	10. US EPA ID	Number	C. Facility's	Phone	<b>;</b>		
	3 Mi. E 7 Mi. N of Knolls	Exit 41 o							
	Clive, UT 84029		UTD 9 9 1 3	3 0 1 7 4 8	801	-323	8-890	)0	
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			CR	<del>\</del>	15 11-48		<u> </u>		
	D. Additional Descriptions for Materials Listed Above 11a. CH217789B		FS		E. Handling	Code	3 for wa	astes Listed Above	
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	15. Special Handling Instructions and Additional Inform				· · · · · · · · · · · · · · · · · · ·	,			
	Emergency Telephone Number	: Tooele	Army Depot	(435) 833–3	504				
	Truck# 572 Cont	ainer#	3040						
	16 CENEDATOR'S CERTIFICATION 1	torials described -	ove on this manifest are	outlinet to todayat sand	lations for	ting e-	nor disc	ocal of Harandana M	lacto
	<ol> <li>GENERATOR'S CERTIFICATION: I certify the ma Printed/Typed Name</li> </ol>	Remais described ab	Signature	subject to lederal regul	ations for repor	ung pro	per dispe		
$ \downarrow $	LARRY MCFARLAND		dan	masan	lan			1.011	603
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L	<ol> <li>Facility Owner or Operator: Certification of receipt</li> </ol>	or waste material	s covered by this manifes	except as noted in I	Item 19.	MY	2/1/	14071	
Ý	Printed/Typed Name	7:1	Signature	2000	200	<u>~₩</u>	<i></i>	Month Da	Year
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	WASTE MANIFEST	1. Generator's US EPA U.T.3.2.1.3.8		Manifest Doc. No.	2. Page 1 of 1		•	1
11	Toole Army Depot SJMTE-CS-EO Bldg 8 Attu Toole, UT 84074 4. Generator's Phone (435)8333504	n: Larry McFar	land an	N4017				,
	5. Transporter 1 Company Name	6.	US EPA ID	) Number	A. Transporter's	Phone		
	MP Environmental Services,	Inc. C.A	0.0.0 T.	5 2 4 2 4 7	877-8	300-5	111	
1	7. Transporter 2 Company Name	в. 	US EPA IC	Number	B. Transporter's	Phone		
	9. Designated Facility Name and Site Address Clean Harbors Grassy Mounta 3 Mi. E 7 Mi. N of Knolls 1		US EPA II		C. Facility's Phor	10		
	Clive, UT 84029	801–3						
	11. Waste Shipping Name and Description				12. Coi	ntainers Type	13. Total Quantity	14. Unit Wt/Vo
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	D. Additional Descriptions for Materials Listed Abov 11a. CH217789B				E. Handling Code	es for Wa	astes Listed Above	
	15. Special Handling Instructions and Additional Info Emergency Telephone Number Truck# 573 Contain	F	CR S OFFC	an				
-	16. GENERATOR'S CERTIFICATION: 1 certify the r	materials described above on	this manifest are no	subject to federal regula	ations for reporting pr	oper disp	osal of Hazardous W	este.
1	Printed/Typed Name		Signature				Month Day	
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Ţ	17. Transporter 1 Acknowledgement of Receipt of M	faterials						
RANSPORTER	Printed/Typed Name Ned Anderton		Signature	led Bucho	<del>[</del>	,	Month Day	603
ဝ္ဂ	18. Transporter 2 Acknowledgement of Receipt of N	Materials		10				
Ë	Printed/Typed Name		Signature	,			Month Da	y Yea
FACI	19. Discrepancy Indication Space							
ㅏ .	20. Facility Owner or Operator: Certification of recei	pt of waste materials cove	ered by this manifes	st except as noted in I	tem 19.	2W30	MUNTI	
T	Printed/Typed Name	Ridelle	Signature	hunt +	2/1/1	-WD	Month Day	y Year

	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. U- T- 3- 2- 1- 3- 8- 2- 0	Manifest Doc. No . 8 . 9 . 4 W + 0 / 8		y 1.	<i>x</i>		::. ·	
1	3. Generator's Name and Mailing Address TOOCLE Army DEpot SJMTE-CS-EO Bldg 8 Att	n: Larry McFarlan	đ						
		of s Phone ( 435 ) 833–3504							
	5. Transporter 1 Company Name	6. L	sporter's P						
	MP Environmental Services.  7. Transporter 2 Company Name		· 0 · 0 · 62 4 2 4 7 JS EPA ID Number	87'	7 <u>-800-</u> nsporter's F	5111			
	7. Hansporto: 2 Company Hamo	Ĭ `	· · · · · · · ·	J. 114	isponer a r	110110			
	<ol> <li>Designated Facility Name and Site Address Clean Harbors Grassy Mount</li> <li>Mi. E 7 Mi. N of Knolls</li> </ol>	ain LLC	JS EPA ID Number	C. Fac	ility's Phone	)		-	
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Ш	D. Additional Descriptions for Materials Listed Above	/e		E. Han	dling Code:	s for Wa	stes Listed Abo	ove .	
	11a. CH217789B								
	15. Special Handling Instructions and Additional Info Emergency Telephone Number	: Tooele Army Depo	ot (435) 833-350	4	<u> </u>	R	un		
	Truck# <u>57/</u> Container#	3041	·		O O	FFC	hn		
	16. GENERATOR'S CERTIFICATION: I certify the r	naterials described above on this mani-	est are not subject to federal regu	lations for I	eporting pro	per dispo	sal of Hazardous	s Waste.	
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L T	20. Facility Owner or Operator: Certification of recei	pt of waste materials covered by th	is manifest except as noted in	Item 19.	W30	041	)75		
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- 1	NON-HAZARDOUS	1. Generator's US	EPA ID No.	Manifest Doc. No.	2. Page	1			
_	WASTE MANIFEST	U. T. 3. 2. 1.	3-8-2-0-8-9-4	N.4.0.19	of ,	l			
<b>A</b>	3. Generator's Name and Mailing Address Tooele Army Depot								
	<b>-</b> -	Tarme MoEla	mland.						
	SJMTE-CS-EO Bldg 8 Attn: Larry McFarland Topele JJT 84074 ( 435 ) 833-3504								
	5. Transporter 1 Company Name		6. US EPA ID N	umber	A. Tran	sporter's Pl	hone		
	MP Environmental Services,	Inc.	C.A.T.0.0.0.6	2 - 4 - 2 - 4 - 7		877-80		111	
	7. Transporter 2 Company Name		8. US EPA ID N	umber	B. Tran	sporter's P	hone		
11				·····					
	<ol> <li>Designated Facility Name and Site Address Clean Harbors Grassy Mount</li> </ol>		10. US EPA ID N	umber	C. Faci	lity's Phone	l		
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**	D. Additional Descriptions for Materials Listed Abo	NA			F. Hand	dling Codes	for Wa	stes Listed Above	<del></del>
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$\mathbf{I}$	15. Special Handling Instructions and Additional Inf	omation							
11	Emergency Telephone Number	: Tooele A	rmy Depot (43	85) 833–350	4 CR				
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11	16. GENERATOR'S CERTIFICATION: I certify the	materials described abo	ve on this manifest are not su	bject to federal regula	tions for re	eportina previ	er disoo	sal of Hazardous Wa	ste.
11	Printed/Typed Name			-,		p,op			
-	**		Signature					Month Day	<i>•</i>
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<b>↓</b>	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name  Ocrr-c// / / / oy d  18. Transporter 2 Acknowledgement of Receipt  Materials	Signature	m Fa-	n			Month Day	S O	
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TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name  Ocre-ell - Lloy of  18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name  19. Discrepancy Indication Space	Materials Materials	Signature	n ,	21			Month Day	Year 5 0/
TRANSPORTER FACIL	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name  Ourrell - Llay d  18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name	Materials Materials	Signature	n ,	21	2002	CV3/	Month Day  V O V	Year 5 0/
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name  19. Discrepancy Indication Space  20. Facility Owner or Operator: Certification of receipt of Printed/Typed Name	Materials Materials	Signature Signature covered by this manifest e	n ,	21	20030	004	Month Day  V O V	Year 5 0/
TRANSPORTER FACILI	17. Transporter 1 Acknowledgement of Receipt of Printed/Typed Name  Ocre-ell - Lloy of  18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name  19. Discrepancy Indication Space	Materials Materials	Signature	n ,	21	20030	00 4	Month Day  V O V	Year 5 0/

ORIGINAL - RETURN TO GENERATOR

		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US		Manifest Doc. No.		1		i. † , i. i.	
1	3.	repended Name and Mailing Address	0.1.0.2	3.0.2.0.0.3.4	<u> </u>	<b>'</b>				
	4.	SJMTE-CS-EO Bldg 8 Att Tooele, UT 84074 Generator's Phone (435 833-3504	tn: Larry M				· <del> </del>			*4
П	5.	Transporter 1 Company Name		6. UŞ EPA ID I	Number	A. Tran	sporter's Pl	hone		
		MP Environmental services		CAT0006					5111	
		Transporter 2 Company Name		8. USEPAID			sporter's F			
		Designated Facility Name and Site Address Clean Harbors Grassy Mount 3 Mi. E 7 Mi. N of Knolls		10. US EPAID! f T-80	Number	C. Faci	lity's Phone	!		
		Clive, UT 84029		UTD9913	0 1 7 4 8		801-	323-	8900	
	11	. Waste Shipping Name and Description		· · · · · · · · · · · · · · · · · · ·			12. Cont	ainers	13. Total	14. Unit
							No.	Туре	Quantity	Wt/Vol
	a.	NON REGULATED MATERIAL, N	ONE, NONE				0 .0 .1		Est.	P
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		Additional Descriptions for Materials Listed About 11a. CH217789B	ve	FS OFFC		E. Han	dling Codes	for Wa	stes Listed Above	<b>1</b> ,
	15	. Special Handling Instructions and Additional Info Emergency TElephone number	r: Tooele		35) 833–350	4				
		Truck# <u>58</u> Containe	er# <u>45</u>	76						
			·							
	16	GENERATOR'S CERTIFICATION: I certify the	materials described abo	<del></del>	subject to federal regula	ations for r	eporting prop	er dispo		
¥		Printed/Typed Name  LARRY MCFARL HUD		Signature	mit	6	~		Month Day	03
H	17	. Transporter 1 Acknowledgement of Receipt of N	Materials		11					
THANSO OR THE		Jettrey N Corn	elibs Si	Signature	Report	m	rolis s	L	Month Day	603
OR I	18	. Transporter 2 Acknowledgement of Receipt of N Printed/Typed Name	Materials	Signature				<u>-</u> .	Month Day	y Year
Ř	10	Discrepancy Indication Space Par Ann	n Armstro	na THN 12. (	ortainer -	VIDA	is C	W	BX 10/17/03	
FAC		· Discrepancy indication opace PCF 70070	II fellotore	9 204 12		N-C	1, 0	<i>1</i> -0 ( )	D. 1.102	
L	20	). Facility Owner or Operator: Certification of rece	ipt of waste materials	s covered by this manifest	except as noted in It	em 19.		20	23/149	92
Y		Printed/Typed Name	1 4-11	Signature	20400.	4	MON		Month Day	Year
		DUP	y Heldi	5		9		برلا	17.037	ps

	NON-HAZARDOUS	1. Generator's US	EPA ID No.	Manifest Doc. No.	2. Pag	e 1				
		U. T. 3. 2. 1.	3-8-2-0-8-9-4	W4021	of	1				
1	Tooele Army Depot SMJTE-CS-EO Bldg 8 Attn: Tooele, UT 84074 Generator's Phone (435) 833-3504	•	Farland					, ·		
	5. Transporter 1 Company Name		6. US EPA ID	Number	A. Tra	rsporter's F	hone			
	MP Environmental Services,		$C \cdot A \cdot T \cdot O \cdot O \cdot O \cdot 6$	:2 -4 -2 -4 -7		877-80		11		
1	7. Transporter 2 Company Name		8. US EPA ID		B. Tra	rsporter's	Phone			
	<ol> <li>pesignated Facility Name and Site Address</li> <li>Clean Harbors Grassy Mounta</li> <li>Mi. E 7 Mi. N of Knolls E</li> <li>Clive, UT 84029</li> </ol>	xit 41 off	10. US EPA ID			ility's Phon		00		
	11. Waste Shipping Name and Description					12. Con No.	tainers Type	13. Total Quanti		14. Unit Wt/Vo
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Ш	D. Additional Description for Manager to Live and Alexander			$\cap$	15 11	dine Code		astes Listed A		<u>i</u>
	D. Additional Descriptions for Materials Listed Above 11a. CH217789B		OFFC OFFC		E. Hai	ding Code	5 101 442	isies Listed P	9000	
Ш	15. Special Handling Instructions and Additional Info	mation			4					
П	Emergency Telephone Number:	Tooele A	army Depot (43	5) 833 <b>~3</b> 504	ļ					
	Truck# 605 Container#	3042	_ · ·	,						
			1111 T							
	16. GENERATOR'S CERTIFICATION: I certify the m	aterials described abo		subject to federal regul	ations for	reporting pro	per disp			
Į.	Printed/Typed Name  CARRY MCFARLARD		Signature	me of	1	المصيد		- 11 O	Day 16	900 [03
Ţ	17. Transporter 1 Acknowledgement of Receipt of Ma	aterials	A	1 1	1			<u>, , , , , , , , , , , , , , , , , , , </u>	<u>,,                                    </u>	
TRANSPORTER	Printed/Typed Name JOSEPH SHINDER FOR	MP	Signature	h Sh	my!			Month 10	16 16	V 003
ĝ	18. Transporter 2 Acknowledgement of Receipt of Ma	aterials								
ËR	Printed/Typed Name		Signature					Month	Day	Yea.
	19. Discrepancy Indication Space									
FA										
ACILIT	20. Facility Owner or Operator: Certification of receip	t of waste materials	s covered by this manifest	except as noted in I	tem 19.	111	1931	11/40	70	7
Y	Printed/Typed Name	TOOMS	Signature	mobile	de		<u> مار د</u>	Monty	Day.	7 Koa
	( ) OLA Y			my (	Y	IV. V	/\	L.V		
		ORIGINAL	- RETURN TO G	ENERATOR						



NON-HAZARDOUS WASTE MANIFEST	1. Generator's US U T 3 2 1	EPA ID No. 3 · 8 · 2 · 0 · 8 · 9 · 4	Manifest Doc. No.	2. Page of 1	1			
3. Generator's Name and Mailing Address Tooele Army Depot SMJTE-CS-EO Bldg 8 Tooele, UT 84074 4. Generator's Phone (435) 83	Attn: Larry Mc							
5. Transporter 1 Company Name MP Environmental Serv		6. US EPA ID N C.A.T. 0.0.0.6	lumber 2 4 7	A. Trans	porter's P 7-800		1	
7. Transporter 2 Company Name		8. US EPA ID N		B. Trans	porter's f	Phone		
Designated Facility Name and Site Ad Clean Harbors Grassy     Mi. E 7 Mi. N of Kn	Mountain LLC.	10. US EPA ID N	lumber	C. Facili	y's Phone	9		
Clive, UT 84029		U_T_D_9_9_1_3	0 1 7 4 8	80	1-323			
11. Waste Shipping Name and Description	n ·	A.V.			12. Cont No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.       NON REGULATED MATERIA	T. NONE NONE				0. 0 . 1-	CM	Est.	P
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d.								
D. Additional Descriptions for Materials L	isted Above	CR Q	7	E. Hand	ing Codes	s for Wa	stes Listed Above	
11a. CH217789B		FS OFFC			•			
15. Special Handling Instructions and Add Emergency Telephone N		rmy Depot (4	35) 833-350	04				
Truck# <u>581</u> Conta	iner# <u>385</u>	<del>5 5222</del>						
16. GENERATOR'S CERTIFICATION: 1	certify the materials described abor-	ve on this manifest are not si	ibject to federal recula	ations for re	ortina proc	per dispo	sal of Hazardous Wa	
Printed/Typed Name		Signature	met	/	_!		Month Day	Year
<u> </u>		Signature //		T.	D.		17 - 17	
17. Transporter 1 Acknowledgement of Reprinted/Typed/Name  18. Transporter 2 Acknowledgement of Reprinted/Typed Name  Printed/Typed Name	eceipt of Materials	Jeffer 1	us 27 C	OUNK	Hius		Month Day	ρ <b>'</b> 3
Printed/Typed Name		Signature					Month Day	Year
19. Discrepancy Indication Space								
F A C C I				20	030	004	1096	
20. Facility Owner or Operator: Certification	on of receipt of waste materials	covered by this manifest	except as noted in It	em 19.	,			
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	ORIGINAL -	- RETURN TO GE	NERATOR					

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	S EPA ID No.	Manifest Doc. No.	2. Pag of	ŀ			15215; N
A	1	3. Generator's Name and Mailing Address TOOELE Army Depot SJMTE-CS-EO Bldg 8 Att Tooele, UT 84074 4. Generator's Phone (435) 833-350	n: Larry M	/cFarland						
		5. Transporter 1 Company Name MP Environmental Services,		6. US EPA ID I		A. Trai	nsporter's P 877–8(		11	
	-	7. Transporter 2 Company Name		8. US EPA ID I	Number	B. Trai	nsporter's F	hone		
		9. Designated Facility Name and Site Address Clean Harbors Grassy Mount 3 MI. E 7 Mi. N of Knolls Clive, UT 84029	Exit 41 off	10. US EPA ID I		C. Fac	ility's Phone		900	
		11. Waste Shipping Name and Description					12. Cont	ainers Type	13. Total Quantity	14. Unit Wt/Vol
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	-	D. Additional Descriptions for Materials Listed Abov		<u> </u>		E Han	dling Codes	for Was	tes Listed Abov	
		11a. CH217789B	ve	(If		E. Hall	uing Codes	101 Was	sies Listed ADOV	5
			U515	264						
		15. Special Handling Instructions and Additional Info			EV 022 3EV					
		3-12		TOV LECOT INA.	131 033-330					
類 [		Truckit Cont			15) 633-350	·				
		Trucks 580 Conf	tainer #			<b>.</b>				
		Trucks 580 Con				-				
		16. GENERATOR'S CERTIFICATION: 1 certify the r	tainer #	ove on this manifest are not su			aporting prop	er dispos		
			tainer #	ove on this manifest are not su		tions for r	1	er dispos	ial of Hazardous V Month Da	
T F		16. GENERATOR'S CERTIFICATION: I certify the r Printed/Typed Name とみんとと みにごみといるので 17. Transporter 1 Acknowledgement of Receipt of M	tainer #	ove on this manifest are not su Signature	ubject to federal regula	tions for r	1	er dispos		y Year
TEANS	- TA-700	16. GENERATOR'S CERTIFICATION: 1 certify the r Printed/Typed Name とみだなす みにごみなしみいむ	tainer #	ove on this manifest are not su	ubject to federal regula	tions for r	1	er dispos		y Year
THANSPOR		16. GENERATOR'S CERTIFICATION: 1 certify the reprinted/Typed Name  ARRY MCFARIA  17. Transporter 1 Acknowledgement of Receipt of Management of Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Management	tainer #	Signature  Signature	ubject to federal regula	tions for r	1	er dispos	Month Di	y Year  D D 3
THANSPORTER		16. GENERATOR'S CERTIFICATION: I certify the reprinted/Typed Name  ARRY MCFARIA  17. Transporter 1 Acknowledgement of Receipt of Mediated/Typed Name  ARRA HOLLAND  Printed/Typed Name	tainer #	ove on this manifest are not su Signature	ubject to federal regula	tions for r	1	er dispos	Month De	y Year  D D 3
		16. GENERATOR'S CERTIFICATION: 1 certify the reprinted/Typed Name  ARRY MCFARIA  17. Transporter 1 Acknowledgement of Receipt of Management of Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Management	tainer #	Signature  Signature	ubject to federal regula	tions for r	1	er dispos	Month Di	y Year  D D 3
F	= 4	16. GENERATOR'S CERTIFICATION: I certify the reprinted/Typed Name  17. Transporter 1 Acknowledgement of Receipt of Months of Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Months of Printed/Typed Name  19. Discrepancy Indication Space	materials described abo	Signature Signature Signature	ubject to federal regula	tions for r	w		Month Da	y Year  D D 3
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	NON-HAZARDOUS 1. Generator's U	US EPA ID No. Manifest Doc. No	2. Pag	- 1			
<b>A</b>	Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McF Tooele, UT 84074 4. Generator's Phone (435) 833-3504			•			
	5. Transporter 1 Company Name	•		nsporter's P			
	MP Environmental Services, Inc. 7. Transporter 2 Company Name	C. A. T. 0. 0. 0. 6. 2. 4. 2. 4. 7		877–80 nsporter's F		11	<del></del>
Notice of the last	7. Hansporter 2 company Name		D. Tiui	ioponor o 1	none		
	Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi. E 7 Mi. N of Knolls Exit 41 off		C. Fac	ility's Phone	1		
	Clive, UT 84029	U.T.D.9.9.1.3.0.1.7.4.8		801-32	3-89	00	
	11. Waste Shipping Name and Description			12. Conta	ainers	13. Total	14. Unit
			_	No.	Туре	Quantity	Wt/Vol
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0.000	0. Additional Descriptions for Materials Listed Above 11a. CH217789B		E. Han	dling Codes	for Wa	stes Listed Above	
	11515305		· i)				
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele A	army Depot (435) 833-3504					
	Truck# <u>605</u> Container# <u>30</u>	42					
	16. GENERATOR'S CERTIFICATION: I certify the materials described at	bove on this manifest are not subject to federal regulati	ions for re	eporting prop	er dispo	sal of Hazardous Wa	ste.
A STANDARD AND A STANDARD	Printed/Typed Name  LARRY MCFARLAND	Signature Far	la	nd		Month Day	Year P3
T R	17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name	Signature	<u> </u>			Month Day	Year
TRANSPORTER	JOSEPH SHINDER FOR MP	Joep Shr	w	1		1020	D'3
OR R	18. Transporter 2 Acknowledgement of Receipt of Materials						
ER	Printed/Typed Name	Signature				Month Day	Year
	19. Discrepancy Indication Space						
FACI							
LITY	20. Facility Owner or Operator: Certification of receipt of waste material	Is covered by this manifest except as noted in Iter	m 19.	2003	004	120	
Y	AFINE MUESTAS	Signature Maestas				Month Day	Year 03

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	NON-HAZARDOUS 1. Generator's US EPA WASTE MANIFEST U.T. 3. 2. 1. 3. 8		2. Pag of 1	- 1			
<b>A</b>	Generator's Name and Mailing Address TOOELE Army Depot SJMTE-CS-Eo Bldg 8 Attn: Larry McFar Tooele, UT 84074 4. Generator's Phone (435) 833-3504	rland					
	5. Transporter 1 Company Name 6.	US EPA ID Number	A. Trai	nsporter's P	hone		
No security	MP Environmental Services, Inc. C A 7. Transporter 2 Company Name 8.	US EPA ID Number		877-8( nsporter's F		11	
avversore.	7. Hansporter 2 company Name 5.		B. Hai	isporter's r	TIONE		
200000000000000000000000000000000000000	9. Designated Facility Name and Site Address 10. Clean Harbors Grassy Mountain LLC	US EPA ID Number	C. Fac	ility's Phone	9	<del></del>	
	3 Mi E 7 Mi N of Knolls Exit 41 off I-80	)					
		D 9 9 1 3 0 1 7 4 8		801-32	23-89	00	
	11. Waste Shipping Name and Description		<u> </u>	12. Cont	ainers	13. Total	14. Unit
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M 1	Additional Descriptions for Materials Listed Above	_	j E. Han	aling Codes	for was	stes Listed Above	
A CONTRACTOR OF THE CONTRACTOR	11a. CH217789B						
A CONTRACTOR OF THE PROPERTY O	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army	Depot (435) 833-3504					
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army	Depot (435) 833-3504					
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army						
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army			U <i>5</i>	153		
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army	040		U 5 eporting prop		329	ste.
	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name	this manifest are not subject to federal regular Signature	ations for re	eporting prop		329	
T	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3	this manifest are not subject to federal regular	ations for re	eporting prop		329 sai of Hazardous Was	ste.
Y TRAS	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION:   certify the materials described above on Printed/Typed Name  2 ARRY MC FARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name   10 A A A A A A A A A A A A A A A A A A	this manifest are not subject to federal regular Signature	ations for re	eporting prop		329 sai of Hazardous Was	
<b>&gt; TRAZOPO</b>	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name  LARRY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name CRA	this manifest are not subject to federal regular Signature Rany M-fa	ations for re	eporting prop		329 sal of Hazardous Was 	Year P.3
▼ TRAXSPORT	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION:   certify the materials described above on Printed/Typed Name  2 ARRY MC FARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name   10 A A A A A A A A A A A A A A A A A A	this manifest are not subject to federal regular Signature Rany M-fa	ations for re	eporting prop		329 sal of Hazardous Was 	Year P.3
<b>→ TRAZ</b> SPORTER	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name  LARY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name   Charles   this manifest are not subject to federal regular Signature Farmy M. Farman Signature	ations for re	eporting prop		329 sal of Hazardous Was  Month Day  VO 20  Month Day  1000	Year P.3 Year	
FAC	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name  LARY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name   Charles   this manifest are not subject to federal regular Signature Farmy M. Farman Signature	ations for re	eporting prop		329 sal of Hazardous Was  Month Day  VO 20  Month Day  1000	Year P.3 Year	
FACILI	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name  2 ARRY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Materials  Printed/Typed Name	this manifest are not subject to federal regular Signature Aarry M. Ja	ations for re	eporting prop		329 sal of Hazardous Was  Month Day  VO 20  Month Day  1000	Year P.3 Year
FACI	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Truck# 572 Container # 3  16. GENERATOR'S CERTIFICATION: I certify the materials described above on Printed/Typed Name  LARRY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials  Printed/Typed Name  18. Transporter 2 Acknowledgement of Receipt of Materials  Printed/Typed Name  19. Discrepancy Indication Space	this manifest are not subject to federal regular Signature Aarry M. Ja	ations for re	eporting prop		329 sal of Hazardous Was  Month Day  VO 20  Month Day  1000	Year P.3 Year

**TRANSPORTER #1** 

12-BLS-C6 Rev. 12/98

* * 1	WASTE MANIFEST	1. Generator's US EPA U T 3 2 1 3		Manifest Doc. No.	2. Page of 1				
1	3. Contrator's Name and Mailing Address Tocale Army Depot								
	SIMTE-CS-EO Bldg 8 Attn: I	arry McFarlan	đ						
	Tooele, UT 84074 4. Generator's Prione ( 435 ) 833-3504			****					
	5. Transporter 1 Company Name	6.	US EPAID I			sporter's F '7–800-		1	
1	MP Environmental Services, 7. Transporter 2 Company Name	1nc. 1C	US EPA ID I	5 2 4 2 4 7 Number		sporter's			
		<u> </u>		<u> </u>					
	<ol><li>Designated Facility Name and Site Address Clean Harbors Grassy Mounta</li></ol>	ain LLC	US EPA ID I	Number	C. Faci	lity's Phon	е		
	3 Mi. E 7 Mi. N of Knolls I	Exit 41 off I-							
	Clive, UT 84029	<u>u</u>	T. D. 9. 9. 1. 3	3. 0, 1, 7, 4, 8	80	1-323		,	1
$\ $	11. Waste Shipping Name and Description					12. Con No.	tainers   Type	13. Total Quantity	14. Unit Wt/Vo
	a.						1.70	~	1
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	15. Special Handling Instructions and Additional Info		D (42)	E) 022 2504				1	
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	16. GENERATOR'S CERTIFICATION: I certify the	materials described above on	this manifest are not s	ubject to federal regula	itions for r	eporting pro	per diapo	sal of Hazardous Wa	aste.
	Printed/Typed Name  LARRY MCFARLA		Signature			1		Month Day	
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	NON-HAZARDOUS WASTE MANIFEST	1. Generator's U. T. 3 . 2 . 1	S EPA ID No. . 3 . 8 . 2 . 0 . 8 . 9 . 4 Manifes	1 Doc. No.	2. Page of				
<b>A</b>	Tooele, UT 84074 4. Generator's Phone (435 ) 833–350	: Larry McE	Farland						ĵa.
	5. Transporter 1 Company Name MP Environmental Services,	Tnc.	6. US EPA ID Number C.A.T.0.0.0.6.2.4.2	2.4.7	1	sporter's P 7–800–!		المراجع المهوالة	-
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	Designated Facility Name and Site Address     Clean Harbors Grassy Mounta	in IIC	10. US EPA ID Number	· · ·	C. Faci	lity's Phone	1		<del></del>
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1 B	P. Additional Descriptions for Materials Listed Abov	/ <del>0</del>			E. Hand	dling Codes	for Was	stes Listed Above	• 1
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Y TRA	15. Special Handling Instructions and Additional Info Emergency Telephone Number:  Truck# 5 73 Cond  16. GENERATOR'S CERTIFICATION: I certify the n Printed/Typed Name  LARY MCIERRE  17. Transporter 1 Acknowledgement of Receipt of M	515289  ormation  Tooele Ar  tainer#  anaterials described above	ove on this manifest are not subject to fed	deral regula			er dispos		y Year
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000000000000000000000000000000000000000		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US U.T.3.2.1.	EPA ID No. 2 . 8 . 2 . 0 . 8 . 9 . 4	Manifest Doc. No. NAO 29	2. Pag of	· 1			
1		Grand Annual Mailing Address SJMTE-CS-EO Bldg 8 Af Tooele, UT 84074 Generator's Phone (435) 833-356	tn: Larry Mo	cFarland						
Seattle and a se		<ol> <li>Transporter 1 Company Name</li> <li>MP Environmental Services</li> </ol>		6. US EPA ID N C A T .0 .0 .0 .6			nsporter's F 87 <b>7–</b> 80		11	
	ľ	7. Transporter 2 Company Name	8	3. US EPA ID N		B. Tra	nsporter's	Phone		
NO.		Designated Facility Name and Site Address Clean Harbors Grassy Mour 3 Mi. E 7 Mi. N of Knolls	ntain LLC Exit 41 off	10. US EPA ID N	lumber		cility's Phone			
2000	L	Clive, UT 84029		J.T.D.9.9.1.3	0 1 7 4 8		801–32			
CONSCIENT CONTRACTOR		11. Waste Shipping Name and Description					12. Con	tainers Type	13. Total Quantity	14. Unit Wt/Vol
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		D. Additional Descriptions for Materials Listed About 11a. CH217789B	ove			E. Har	dling Codes	s for Was	stes Listed Above	
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		5. Special Handling Instructions and Additional In Emergency Telephone Number Truck# 580 Container#	r: Tooele A			4		1	<del>I</del> M	-
		6. GENERATOR'S CERTIFICATION: I certify the	materials described abov	e on this manifest are not su	bject to federal regula	ions for I	eporting prop	oer dispos	sal of Hazardous Wa	ste.
V		Printed/Typed Name LARRY MCEARL	AVO	Signature	mcf	wh	and		Month Day	Year O.3
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R T E R		Printed/Typed Name	/	Signature					Month Day	Year
FACI		9. Discrepancy Indication Space								
LITY		20. Facility Owner or Operator: Certification of rece	ipt of waste materials o	covered by this manifest e	xcept as noted in Ite	m 19.	2003	2004	1212	
Ľ		Printed Typed Name ASNEY MALSTAS	4	Signatura /	1 Maes	to		200 25 hates	Month Day	Year UZ
		Hoy J. J. KELLER & ASSOCIATES, INC. h, WI 54957-0368		V				12-1	BLS-C6 Rev.	12/98

**TRANSPORTER #1** 

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	202203	NON-HAZARDOUS 1. Generator's US EPA ID	No. Manifest Doc. No. 2 .0 .8 .9 .4					
<b>A</b>		Greeners Name and Malling Address  SJMTE-CS-EO Bldg 8 Attn: Larry Mcfa Tooele, UT 84074  Generator's Phone (435)833-3504			L,,	P		
200		Transporter 1 Company Name 6.	US EPA ID Number	A. Tran	sporter's P	none		
200000	_		T 0 0 0 6 2 4 2 4 7 US EPA ID Number		877-80		111	
EGEN IN	1.	Transporter 2 Company Name 8.		B. Tran	sporter's P	none		
	9.	Designated Facility Name and Site Address Clean Harborw Grassy Mountain LLC  3 Mi E 7 Mi N of Knolls 41 off I-80	US EPA ID Number	C. Faci	lity's Phone			
			0 9 9 1 3 0 1 7 4 8		801-32	23-89	000	
	11	. Waste Shipping Name and Description			12. Conta	ainers	13. Total	14. Unit
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200000000000000000000000000000000000000	15	Special Handling Instructions and Additional Information Friengency Telephone Number: Tocele Art	my Depot (435) 833 <b>9</b> 3	504				
		Truck# 575 Container # =	110					
	16	. GENERATOR'S CERTIFICATION: 1 certify the materials described above on thi	s manifest are not subject to federal regula	ations for re	porting prop	er dispos	sal of Hazardous Was	ste.
No. of the last of		Printed/Typed Name	Signature	, ,	,	1	Month Day	Year 23
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	19	. Discrepancy Indication Space						
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Ĺ	20	. Facility Owner or Operator: Certification of receipt of waste materials covered	d by this manifest except as noted in h	em 19. 2	20030	041	33	
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		NON-HAZARDOUS 1. Generator's US	S EPA ID No. 3 · 8 · 2 · 0 · 8 · 9 · 4	Manifest Doc. No.  1403/	2. Pag	e 1			
<b>A</b>	3.	Generator's Name and Mailing Address Tooele Army Depot SUMTE-CS-EO Bldg 8 Attn: Larry M Tooele, UT 84074 Generator's Phone (435 833-3504						******	
	_	Transporter 1 Company Name	6. US EPA ID N		i .	nsporter's P			
The second	7.	MP Environmental Services, Inc. Transporter 2 Company Name	8. US EPA ID N			77 <u>–800</u> nsporters F		1	
2000		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \							
	9.	Designated Facility Name and Site Address Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off	10. US EPA ID N	lumber	C. Fac	ility's Phone	1		
STATE OF THE PARTY		Clive, UT 84029	UTD9913	0 1 7 4 8	8	01-323	-890	0	
	11	. Waste Shipping Name and Description				12. Cont No.	1	13. Total Quantity	14. Unit Wt/Vol
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	D.	Additional Descriptions for Materials Listed Above 11a. CH 217789B			E. Han	dling Codes	for Wa	stes Listed Above	<del>-</del>
AND SOUTH SO			U515	401					
	15	Special Handling Instructions and Additional Information Friergency Telephone Number: Tooele	Army Depot (43	35) 833–350	)4				
N (ANTOCOCOL PROPERTY		Truck# 606 Container#	3108						
Name and Address of the Address of t	16	. GENERATOR'S CERTIFICATION: I certify the materials described abo	ove on this manifest are not su	bject to federal regula	itions for r	eporting prop	er dispo	sal of Hazardous Wa	ste.
¥		Printed/Typed Name LARRY MCFARLAND	Signature	mefa	la	nd		Month Day	Year
Ţ	17	. Transporter 1 Acknowledgement of Receipt of Materials	Signature	<del></del>				Month Day	Vaar
S		Printed Typed Name  Oarran Lloyd	Signature )	11 /	2			Month Day	o S
POR	18	. Transporter 2 Acknowledgement of Receipt of Materials							
TRANSPORTER		Printed/Typed Name	Signature	/				Month Day	Year
TOWNSON WARRINGS	19	. Discrepancy Indication Space		,					
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LIT	20	. Facility Owner or Operator: Certification of receipt of waste materials	s covered by this manifest e	except as noted in Ite	em 19. /	2003	004	136	
Υ		HEMPHOUSE NAME ESTAS	Signature	y Mall	stes			Month Day	Year P
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	NON-HAZARDOUS	Generator's US EPA II		Manifest Doc. No.		1			
_	WASTE MANIFEST	UT32138	2.0.8.9.4	W. F. 0.3. L	of ·	1			
	3. Generator's Name and Mailing Address Tooele, Army Depot SJMTE-CS-EO Bldg 8 A Tooele, UT 84074 4. Generator's Phone (435) 833-350	ttn: Larry McF	arland						
	5. Transporter 1 Company Name	6.	US EPA ID I	lumber	A. Tran	sporter's l	hone		
	MP Environmental Services	, Inc. CA	T. 0. 0. 0. 6	.2.4.2.4.7	8	77-800	D-511	1	
	7. Transporter 2 Company Name	8.	US EPA ID I	lumber	B. Tran	sporter's	Phone		
	<ol> <li>Designated Facility Name and Site Address</li> <li>Clean Harbors Grassy Mount</li> <li>Mi E 7 Mi N of Knolls E</li> </ol>					ity's Phon		_	
	Clive, ut 84029	U. T	D. 9. 9. 1. 3	.0.1.7.4.8	80	01–32			
	11. Waste Shipping Name and Description					12. Con No.	tainers Type	13. Total Quantity	14. Unit Wt/Vo
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	D. Additional Descriptions for Materials Listed Abov 11a. CH217789B	0	V		E. Harv	JFFC	s for Wa	stes Listed Above	•
	<ol> <li>Special Handling Instructions and Additional Info Emergency Telephone Number</li> </ol>		v Denot (4	35) 833-35	04				
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	Truck# _ 580 (	ontainer# <u>5</u>	177	_					
	16. GENERATOR'S CERTIFICATION: I certify the r	naterials described above on the	is manifest are not s	ubject to federal regula	tions for re	ecorting pro	oner dispo	sal of Hazardous V	/aste.
1	Printed/Typed Name		Signature	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		- Porg p	, por 0.0p.	Month Da	
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Į	17. Transporter 1 Acknowledgement of Receipt of N	aterials							
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Ř	<ol> <li>Transporter 2 Acknowledgement of Receipt of Merceipt /li></ol>	atenais	Signature					Marth 2	
TRANSPORTER	Timew Typed Manie		Signature					Month Da	y Year
	19. Discrepancy Indication Space								
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LITY	<ol> <li>Facility Owner or Operator: Cartification of recal</li> </ol>	ot of waste materials covere	ed by this manifest	except as noted in It	em 19.	200	300	4137	
Y	/Printed/Typed Narge		Signature, 1	M - 1. L-				Month Da	) (\?
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		Ne H ZARDOUS	1. Generator's US EPA II		Manifest Doc. No.	2. Page 1			
1	3.	WASTE MANIFEST  Generator's Name and Mailing Address	UT32138	20894	دو به به	0: 1			-
1		Tooele Army Depot	tn: Larry McF	arland	·				
	5.	Transporter 1 Company Name	6.	US EPA ID N	umber	A. Transpo	rter's Phone		
1		MP Environmental Services		т 0.0.0.6			-800-511	1	
	7.	Transporter 2 Company Name	8. 	US EPA ID N		B. Transpo	rter's Phone		
11	9.	Designated Facility Name and Site Address	10.	US EPA ID N		C. Facility's	Phone		
$\parallel$	•	Clean Harbors Grassy Mour 3 Mi E 7 Mi N of Knolls H		n					
$\parallel$		Clive, UT 84029		D 9 9 1 3	0, 1, 7, 4, 8	801	-323-890	00	
	11.	Waste Shipping Name and Description					2. Containers	13. Total	14. Unit
							No. Type	Quantity	Wt/Vol
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1	D	Additional Descriptions for Materials Listed Abo	ve ·	FS	HIV	F. Handling	Codes for We	stes Listed Above	1
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	15.	Special Handling Instructions and Additional Info Emergency Telephone Number		v Depot (4)	35) 833 <u>-</u> 35(	04			
				_	,	• •			
		Truck# <u>58/</u> Cor	ntainer# _50	54	-				
	16.	GENERATOR'S CERTIFICATION: I certify the	naterials described above on the	nls manifest are not su	bject to federal regula	ations for repor	ting proper dispo	sal of Hazardous W	aste.
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RANGORIER		Printed Typed Name	11-5	Signature			11	Month Day	You
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Ř	18,	Transporter 2 Act owledgement of Receipt of I Printed/Typed Name	naterrals	Signature		,	var-v-	Month Day	y Year
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	19.	Discrepancy Indication Space							
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		Printed/Typed Name		Signature 1	00 70	MA	1	Month Day	y Year
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		NON-HAZARDOUS 1. Generator's t		Manifest Doc. No.	2. Pag	e 1		Marine Comment	
1	3. 4.	Generator's Name and Mailing Address Tooele Army Depot	y McFarland	· · · · · · · · · · · · · · · · · · ·					
T CONTROL OF THE CONT	5. Transporter 1 Company Name 6. US EPA ID Number A. Transporter's Phone Privironmental Services, Inc. C. A. T. O. O. O. 6. 2. 4. 2. 4. 7 877-800-51							11	
962700000	7.	Transporter 2 Company Name	8. US EPA ID Nur		B. Tran	nsporter's	Phone		
	9.	9. Designated Facility Name and Site Address 10. US EPA ID Number Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I-80							
		Clive, UT 84029	[U, T, D, 9, 9, 1, 3, (	0.1.7.4.8		801–32	23-89	00	
	11.	Waste Shipping Name and Description				12. Cont	ainers	13. Total Quantity	14. Unit Wt/Voi
	a.	NON REGULATED MATERIAL, NONE, NONE				0 0 1		Est. #2 9 9 9	P
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	D. Additional Descriptions for Materials Listed Above 11a. CH217789B  E. Handling							stes Listed Above	. <b></b>
			U515						
	15.	Special Handling Instructions and Additional Information Tooels Emergency Telephone Number: Tooels	e Army Depot (435	6) 833–350	4				
		Truck# <u>577</u> Container# <u>3/C</u>	9						
	16.	GENERATOR'S CERTIFICATION: I certify the materials described at	pove on this manifest are not subje	ct to federal regula	tions for re	porting prop	er dispos	sal of Hazardous Wa	iste.
		Printed/Typed Name  LARRY MCEARLAND	Signature	nefor	1			Month Day	Year
ī	17.	Transporter 1 Acknowledgement of Receipt of Materials	Ca Cong ?	- Jan	Control of	<u> </u>			ريوس
TRANSPORTER		Printed/Typed Name Ped Chacka FT	Signature	ne far Exuc				Month Day	45°
OR P	18.	Transporter 2 Acknowledgement of Receipt of Materials							
ER		Printed/Typed Name	Signature					Month Day	Year
FAC	19.	Discrepancy Indication Space							
YTIL	20.	Facility Owner or Operator: Certification of receipt of waste material	s covered by this manifest exce	ept as noted in Ite	m 19.	2003	000	1138	
Y	f	Printed/Typed Name TONION MAUSTAS	Signature	Male	stas			Month Day	)   0.2

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	NON-HAZARDOUS 1. Generator's	s US EPA ID No. Manifest Doc. No. 1 . 3 . 8 . 2 . 0 . 8 . 9 . 4 W. 4 . 0 3 5	2. Page of <b>1</b>				
<b>A</b>	3. Generator's Name and Mailing,Address TOOGLE Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry Toocle, UT 84074						
	4. Generator's Phone ( 435 ) 833– <b>7</b> 504  5. Transporter 1 Company Name	6. US EPA ID Number	A. Tran	sporter's F	hone		
	MP Environmental Services, Inc.	C.A.T.0.0.0.6.2.4.2.4.7	<u> </u>	877-8	00-5	111	~
	7. Transporter 2 Company Name	8. US EPA ID Number	B. Tran	sporter's I	Phone		
Season and a season a season and a season and a season and a season and a season an	Designated Facility Name and Site Address	10. US EPA ID Number	C Facil	ity's Phone			
	Clean Harbors Grassy Mountain LLC	To. OS EL A IS NUMBER	O. Taon	ny o i nom	•		
	3 Mi E 7 Mi N of Knolls Exit 41 of	ff I-80					
	Clive, ut 84029	UTD991301748	<u>l</u>	801-3			,
	11. Waste Shipping Name and Description			12. Con		13. Total	14. Unit
				No.	Туре	Quantity	Wt/Vo
	a.				07	Est.	
	NON REGULATED MATERIAL, NONE, NONE	3		0.0.1		54000	P
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	D. Additional Descriptions for Materials Listed Above		E. Hand	lling Codes	s for Wa	stes Listed Above	L
	D. Additional Descriptions for Materials Listed Above 11a. CH217789B			·			
0000	U 515290		<u></u>				
2002-2003	15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooel	le Army Depot (435) 833-350	)4				
	_ 1,1,	- 4 /					
	Truck# 573 Contianer# 30	04/		AAA			
			/	4/11			
	16. GENERATOR'S CERTIFICATION: I certify the materials described	above on this manifest are not subject to federal regula	ations for re	porting pro	per dispo	sal of Hazardous Was	ste.
25.00	Printed/Typed Name	Signature				Month Day	Year
¥	LARRY MCFARLAND	day me fact	-perm	<u>d</u>		VOZO	<b>P</b> 3
TR	17. Transporter 1 Acknowledgement of Receipt of Materials		<i>[</i>				
ŠŽŠ	PrintedTyped Name Ned Anderto-	Signature				Month Day	)   <u>0</u> 3
ρ O	18. Transporter 2 Acknowledgement of Receipt of Materials	july ever					
TRANSPORTER	Printed/Typed Name	Signature				Month Day	Year
Ř	do Di						<u> </u>
	19. Discrepancy Indication Space						
FAC							
<b>8</b> 1							
LIT	20. Facility Owner or Operator: Certification of receipt of waste mater	rials covered by this manifest except as noted in It	<sup>em 19.</sup> 7	003	004	152	\
Ÿ	Arinted/Typed Nange	a: (A) (A) (A)	•			Month Day	Year
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CHERRY		WASTE MANIFEST U.T.3.2.1.3.8  3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larry McF8 Tooele, UT 84074 4. Generator's Phone (435) 833-3504	8.2.0.8.9.4 W.4.036 arland	of 1	<u> </u>			
	Ī	5. Transporter 1 Company Name 6.	A T 0 0 0 6 2 4 2 4 7	A. Trai 87	sporter's P 7-800-	hone 5111		
		7. Transporter 2 Company Name 8.	US EPA ID Number	B. Tran	nsporter's F	Phone		
		9. Designated Facility Name and Site Address 10. Clean Harbors Grassy Mountain LLC 3 Mi E 7 Mi N of Knolls Exit 41 off I—			-323-			
	}	Clive, UT 84029 U.1	TD 9 9 1 3 0 1 7 4 8	80	12. Cont		13.	14.
			Again (A. 1944)		No.	Туре	Total Quantity	Unit Wt/Vol
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		D. Additional Descriptions for Materials Listed Above 11a CH217789B		E. Han	dling Codes	for Wa	stes Listed Above	<u> </u>
		11d Cn2177035	U51533Q					
		15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Art	my Depot (435)833-3504		A	M		
		Truck# 572 Container# 304	<u></u>		<i>/</i> [1			
			·					
	-	16. GENERATOR'S CERTIFICATION: I certify the materials described above or Printed/Typed Name	Signature		1	er dispos	sal of Hazardous Was  Month Day	Year
1	! -	LARRY MCFARLAND  17. Transporter 1 Acknowledgement of Receipt of Materials	dany me fail	an	ال		1020	103
TRANSFORTER	1	Finted/Typled Name ORR	Signature				Month Day	Year D3
) F O F		18. Transporter 2 Acknowledgement of Receipt of Materials	Turaia					ر پر
E F	1	Printed/Typed Name	Signature				Month Day	Year
TEACHTER FACILITY		19. Discrepancy Indication Space						
	.	20. Facility Owner or Operator: Certification of receipt of waste materials cover	ered by this manifest except as noted in Ite	m 19. /	WO3	300	AISA	
		Printed/Typed Name SAA TUUS	Signature	M)			Month Day	( Y 99 )

TRANSPORTER #1

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's U	JS EPA ID No. .3 .8 .2 .0 .8 .9 .4	Manifest Doc. No.	2. Pag	i						
		3. Generator's Name and Mailing Address Tocele Army Depot	to: Tarry M	•	<u> </u>								
	١	5. Transporter 1 Company Name  MP Environmental Services, Inc.  (C. A. T. O. O. O. 6. 2. 4. 2. 4. 7)						nsporter's Phone					
		the state of the s							877-800-5111 sporter's Phone				
	9. Designated Facility Name and Site Address 10. US EPA ID Number C. Facility's Phone												
		<ol> <li>Designated Facility Name and Site Address Clean Harbors Grassy Moun</li> <li>Mi. E 7 Mi. N of KNolls Clive, UT 84029</li> </ol>				C. Fac	801 <b>–</b> 3		900				
	Ì	11. Waste Shipping Name and Description				<b>L</b>	12. Cont	ainers	13. Total	14. Unit			
		a.					No.	Туре	Quantity	Wt/Vol			
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CHEMITATOR		D. Additional Descriptions for Materials Listed Ab 11a. CH217789B	ove			E. Han	dling Codes	for Wa	I stes Listed Above	e .			
				0515427									
		15. Special Handling Instructions and Additional Information Emergency Telephone Number: Tooele Army Depot (435) 833-3504  Truck# 58/ Container# 5/97											
		16. GENERATOR'S CERTIFICATION:   certify the	materials described at	pove on this manifest are not su	bject to federal regula	tions for r	eporting prop	er dispo	sal of Hazardous V	/aste.			
		Printed/Typed Name  LARRY MCFARL	anso	Signature	y mc F		Jan en	L	Month Da	y Year 2			
	<u>,</u>	17. Transporter 1 Acknowledgement of Receipt of			411	and the same for the same				Canada			
1 200		Printed/Typed Name Deffrey NCOME	125 50	Signature	upr Gr	na	Jes se	L_	Month Da	Year Year			
20 S	בו ו	18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name	Materials /	Signature					Month Da	ny Year			
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1	L	20. Facility Owner or Operator: Certification of rec	eipt of waste material	is covered by this manifest e	except as noted in Ite	em 19.	6030	041	80				
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	NON-HAZARDOUS 1. Generator's US 8		Manifest Doc. No.	2. Pag of	e 1			1000-		
A	3. Generator's Name and Mailing Address Tooele Army Depot SJMTE-CS-EO Bldg 8 Attn: Larmy McFar Tooele, UT 84074 4. Generator's Phone (435) 833-3504	0.6.2.0.8.9.41			1					
	5. Transporter 1 Company Name 6	hone								
		C-A-T-0-0-0-5-2			877-		5111			
	7. Transporter 2 Company Name 8. US EPA ID Number B. Transporter's Phone									
	Designated Facility Name and Site Address	0. US EPA ID Nur		C. Facility's Phone						
	Clean Harbors Grassy Mountain LLC. 3 Mi. E 7 Mi. N of Knolls Exit 41 off Clive, ut 84074	I-80 J.T.D.9.9.1.3.0	1740		001 1	) ) )	2000			
	11. Waste Shipping Name and Description	7.1.0.2.2.1.3.0	1.1.7.4.0		12. Conta					
	The value of applied value and observation				No.	Туре	Total Quantity	Unit Wt/Vol		
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	D. Additional Descriptions for Materials Listed Above  E. Handling Codes for Waste						stes Listed Above			
	11a. CH217789B				ANA					
	U5152	.67			/11" \					
	15. Special Handling Instructions and Additional Information									
	Emergency Telephone NUmber: Tooele Ar	my Depot (435)	833-3504							
	Truck# 580 Container# 5	219								
	16. GENERATOR'S CERTIFICATION: I certify the materials described above	on this manifest are not suble	ect to federal regula	ions for r	eporting prop	er dispos	sal of Hazardous Was	te.		
	Printed/Typed Name	Signature				• • • • • • • • • • • • • • • • • • • •	Month Day	Year		
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8 R	18. Transporter 2 Acknowledgement of Receipt of Materials	0- /						'saper'		
TRAZSPORTER	Printed/Typed Name	Signature					Month Day	Year		
	19. Discrepancy Indication Space						- <u> </u>	<b>_</b>		
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L	20. Facility Owner or Operator: Certification of receipt of waste materials co	overed by this manifest exc	ept as noted in Ite	m 19.	011121	11. 11	211			
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	NPrinted/Typed Name	Signature	1 Mai	1/4			Month Day	Year		
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